

**Compendium**  
*of*  
**WatSan Publications**

**NGO FORUM**  
For Drinking Water Supply & Sanitation

First published November 2001

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## Foreword

NGO Forum, the national apex networking & service delivery agency in the water supply and sanitation sector has been dedicated for 2 decades for the sector promotion. To contribute in the improvement of the public health scenario of the poor and disadvantaged group of people is NGO Forum's mission. For achieving the desired goal of the WatSan sector, NGO Forum provides hardware and software services in an integrated fashion to the people through its partner NGOs, CBOs and private sector actors to attain a sustainable development in the WatSan sector.

Information dissemination plays a very vital role in NGO Forum's Software Services. NGO Forum maintains a strong network with the sectoral and trans-sectoral organizations in the sector and facilitates exchange of relevant information among them. It has been realized by NGO Forum that there is a felt need among many individuals, organizations and stakeholders in the sector and across the sector about relevant information, documents and publications on water, sanitation and hygiene issues. As the apex body in the WatSan sector, NGO Forum remains in a convenient position to accumulate various information on WatSan and hygiene promotion from different corners. Hence, the Forum initiated to consolidate the abstracts of different useful publications available in the sector. This Compendium is the materialization of that realization.

This Compendium is a ready reference of various publications on WatSan and hygiene issues published by different organizations. Abstracts of a good number of publications have been incorporated in this Compendium so that any potential reader can get idea instantly on the particular publication and feels interested to get into the main publications from the concerned organizations.

NGO Forum believes, the Compendium would be a very useful tool for respective government agencies, NGOs, UN-organizations, donor-bodies and stakeholders who have been contributing for the improvement of the WatSan sector. Hope, the Compendium finally will enrich the WatSan partners & stakeholders by sharing experiences with others both in and outside the country.

**S.M.A. Rashid**  
Executive Director

## **Acknowledgement**

This Compendium is the outcome of the concerted effort of many organizations that are involved in the WatSan promotion and directly contributing to the development of WatSan situation of Bangladesh. This Compendium is the compilation of the abstracts of a good number of documents and publications of different organizations provided to NGO Forum to share and exchange views and ideas on different aspects of water, sanitation and hygiene practices among the stakeholders and potential information seekers.

I acknowledge the potential contribution of the stakeholders who helped us by sharing necessary and relevant information on the publications on WatSan and hygiene issues of their respective organizations, and finally have made this Compendium published by providing the respective documents to NGO Forum. We express our sincere apologies to those with whom we could not contact to collect and present their publications in the Compendium.

The contribution of different organizations with their publications for producing this Compendium is acknowledged with heartiest thanks. Gratefully, I would like to express my thanks and gratitude to those individuals who extended necessary cooperation through valued suggestions and guidance in relation to this publication and for making this publication a useful contribution to the WatSan sector.

Finally, I extend my thanks to my colleagues who deserve appreciation for their hard-work and all out efforts in terms of publishing this Compendium along with performing their day to day responsibilities.

**Joseph Halder**  
Sr. Advocacy & Information Officer

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# ***ARSENIC***

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# **Annesha**

## **The Quest on Arsenic**

*Prepared by:*  
Asiatic Social

*Published by:*  
DPHE & Unicef-Bangladesh, February 1999

The problem of arsenic contamination in groundwater of Bangladesh has major implications on national health. For this reason the Government of Bangladesh along with Unicef has undertaken an arsenic mitigation programme. This Publication contains the key findings of the research and the post analysis of implications for communication strategy. The Document is organized in two parts. Part I consists of "Need and Objectives of Research" and the "Methodology Adopted for Conducting and Analyzing the Research". Part II of the Document contains the "Key Findings" from the field. The findings have been divided under relevant thematic heads. At the end of each section implication for communication have been listed. Key findings and implications are identified through a process of discussion and consensus by all research team members.

## **Arsenic 2000**

*-- An Overview of the Arsenic Issue in Bangladesh*

*Prepared by:*  
Elizabeth M. Jones

*Published by:*  
WaterAid-Bangladesh, December 2000

This Report provides an overview of the arsenic issue in Bangladesh primarily for agencies, organizations and individuals who are not water sector specialists and who want an informed summary of current knowledge on: the background to the arsenic contamination issue; the potential scale of the problem; the work of 35 organizations active in arsenic mitigation; the instrumentation methods for the detection of arsenic; and the arsenic mitigation options. The Report shares that there is a clear need for safe water options and a coordinated approach to the arsenic issue. The current situation is such that numerous government departments, donors, NGOs, development banks and academic institutions are involved in the technical and social issues relating to arsenic contaminated groundwater. This Report briefly summarizes the activities of various organizations in the hope of increasing coordination, information sharing and thus the effectiveness of the collaborative inputs to the accelerate.

## **Arsenic Awareness in Six Bangladesh Towns**

*Edited by:*  
Henric Dierx

*Published by:*  
Royal Netherlands Embassy, Dhaka, March 2000

Nick Jenkins

This Report focuses on the general public – people’s reactions to the news about arsenic, their special concerns, and their water use practices. The highlighted contents in the Report are description of awareness programme, focus group discussions with caretakers and users, the hand tubewell user survey, and school children’s awareness of arsenic-related issues. The Report elaborates these contents in detailed and scopes the readers and users of this Report to get into it with ease and interest.

## **Arsenic Booklet**

*Edited by:*

Dr. Abul Hasnat Milton

*Published by:*

NGO Forum for DWSS, December 2000

This Arsenic Booklet is to provide information on arsenic contamination to the community people. Through this Booklet NGO Forum attempts to provide factual information about arsenic poisoning and the arsenic issue has been explained in detail. The Booklet is written based on different information obtained from the internet, journals, magazines, periodicals, research papers, books and different sources. The Booklet discusses topics like safe water, basic information about arsenic, the source of arsenic-free safe water, arsenic testing, field kit system, cause of arsenic poisoning in groundwater, the safe limit of arsenic in drinking water, the adverse effect of arsenic on human body, detecting arsenicosis patients, arsenic problem in Bangladesh perspective, arsenic in social context, arsenic in global context, etc.

### **Arsenic Durikoroney Balti Projukti Bishaiak Proshikkhan Sahaika (Training Module on Operation and Maintenance of Bucket Treatment Unit)**

*Prepared by:*

Training Cell, NGO Forum for DWSS

*Published by:*

NGO Forum for DWSS

This is a Training Module on operation and maintenance of Bucket Treatment Unit, designed for family members in the arsenic affected areas, selected by partner NGOs to give them knowledge on this technology and help them use it. The Module for this 1-day training course has the following contents:

- i) Concept of safe water;
- ii) Concept of arsenic situation in Bangladesh;
- iii) Existence of arsenic in tubewell water and its reaction in human body;
- iv) Treatment materials and its functions on arsenic filtration;
- v) Concept of Bucket Treatment Unit technology and attachment of arsenic filtration unit;
- vi) Preventing arsenic contamination by using filtration unit in tubewell water;
- vii) Bucket Treatment Unit operation and maintenance by family members.

## **Arsenic in Bangladesh**

### **Report on the 500-Village Rapid Assessment Project**

*Analysis and Text:*  
Shafiul Azam Ahmed  
Golam Morshed

*Published by:*  
Dhaka Community Hospital  
May 2000

*Edited by:*  
Quazi Quamruzzaman  
Mahmudur Rahman  
Allison Quazi

This Report is designed to share the results of the 500 village Rapid Assessment Project (RAP) with all stakeholders involved in arsenic mitigation. This Report focuses on the study findings that 200 hot spot villages were identified in various districts for a thorough, in-depth survey. All the tubewells of these 200 villages were examined for arsenic contamination and marked accordingly; all members of the village community were screened for visible disease manifestation (for chronic arsenic poisoning) and listed; all alternative water sources in each village were identified and available knowledge regarding chronic arsenic poisoning was disseminated amongst the people. In the second phase, 300 more hot spot villages were identified and surveyed. This Report highlights that DCH, in collaboration with SOES, cross checked the field data and tested the biological samples. Information and data generated in the 500 villages surveyed in the RAP were instrumental in initiating a large scale action programme.

## **Arsenic Pollution in Groundwater of Bangladesh**

*Compiled & Edited by:*  
Mir Waliuzzaman

*Published by:*  
Dhaka Community Hospital Trust  
November 1997

This Booklet gives an overview about the arsenic situation in groundwater of Bangladesh. The Booklet describes about arsenic, its origin and background, maximum permissible concentration of arsenic in drinking water, and health hazards due to arsenic. It also describes social problems being created due to arsenic. It shows how to ascertain arsenic contamination in human body. The Booklet also describes the level of arsenic toxicity. It explains that if one avoids arsenic contaminated water at an early stage of toxicity manifestations, one's total cure is possible. Patient identification and the role of Dhaka Community Hospital have also been



briefed in this Booklet. The Booklet contains both Bangla and English versions in the same volume.

## **Arsenic Sachetonota O Niroson Bishaiak Proshikkhan Sahaika (Training Module on Arsenic Mitigation)**

*Prepared by:*  
Training Cell, NGO Forum for DWSS

*Published by:*  
NGO Forum for DWSS

This is a Training Module, designed for field workers of partner NGOs to enhance their knowledge on arsenic issue i.e. arsenic contamination, arsenicosis, patient identification and arsenicosis testing. The Module for the 5-day training course has following contents: i) Concept of safe water, sources of water and concept of arsenic contamination; ii) Arsenic situation in Bangladesh; iii) Possible causes for contamination of groundwater by arsenic; iv) Arsenic contaminated diseases and prevention; v) Process of water collection for arsenic identification in water; vi) Providing important messages after patient identification and existence of arsenic in groundwater; vii) Marking tubewells for arsenic and alternative water technologies for safe water and the process of arsenic mitigation.

## **Arsenic Testing of Newly Installed Tubewells and Quality Control**

*Prepared by:*  
Md. Jakariya  
Richard Johnston  
AMR Chowdhury

*Published by:*  
BRAC, April 1999

This Report highlights the study findings that using the NIPSOM field kit, the tested tubewells were marked red if contaminated with levels higher than the accepted limit and green if below that limit. Of the 13,442 installed tubewells, field workers were able to test 94% successfully, 3.6% were found to be inactive and the remaining 2.7% were identified. Further investigation into why tubewells were inactive was not undertaken. In many cases it was reported by the local people that due to common ownership of the tubewell, no user took responsibility to repair damaged tubewells. Rather, their decision was to just wait until DPHE mechanics come to repair it. The number of tubewells contaminated with arsenic above the acceptable limit (i.e.  $\geq 50$  ppb) were found to be 521 (4% of the total tested). The quality of testing by the field testers was found to be high and the effectiveness of the field kits was found to be adequate. The Report reveals that DPHE have been relatively successful to avoid arsenic affected areas as the number of tubewells contaminated with arsenic above the acceptable limit was low.

## **Arsenicosis in Bangladesh**

*Prepared by:*

Dhaka Community Hospital Trust

*Published by:*

Dhaka Community Hospital Trust  
February 1998

Arsenic pollution is now considered as a great threat to the future generation of the country. Bangladesh has emerged as the most vulnerable place with regards to arsenic pollution as the extent and spread of the problem have taken a serious turn. The Book includes different chapters containing subjects like Arsenic Pollution in Bangladesh; Arsenic: King of Poison; Arsenic Toxicity in Human Body; How Pollution Spreads; Arsenic: Country to Country; Arsenic: A Tragedy for Millions; Dhaka Community Hospital; 65 Million People at Risk; Social Problems of the Arsenic Victims; Samta: Now an Isolated Village; Efforts of Prevention and Remedy; Arsenic Pollution in Bangladesh and India-20-step Recommendations of WHO; Situation of Bangladesh is the worst; and so on. These chapters elaborate different information and facts about arsenic, its harmful effects, the situation of the country in this regard, risk of people being affected, remedial efforts and so on.

## **Chemistry of the Arsenic-containing Groundwater & Solar Oxidation and Removal of Arsenic from Drinking Water (SORAS)**

*Prepared by:*

Daniel Gechter

*Published by:*

EAWAG, Swiss Federal Institute for  
Environmental Science & Technology  
SANDEC, Water & Sanitation in Developing Countries, 1999

The SORAS field tests aimed at assessing the efficiency of the method using different qualities of natural arsenic-containing well waters in Bangladesh. These field tests determine the arsenic removal efficiency and limitations of the SORAS method, which can be regarded as low-cost and simple method, applicable at household level, to reduce arsenic in well waters. The SORAS method is based on photochemical oxidation of As(III) to As(V), followed by precipitation and filtration of As(V) adsorbed on Fe(III)-(hydr)oxides. The Report describes the geological and hydro-geological situation in Bangladesh and narrates more in detail the chemistry of different well waters and the preliminary results of the SORAS field tests in Bangladesh. The Report concludes that SORAS method can potentially be improved, however, additional laboratory and field research is necessary.

## **Combating A Deadly Menace**

### **Early Experiences with a Community-based Arsenic Mitigation Project in Bangladesh**

*Edited by:*

Hasan Shareef Ahmed

*Published by:*

BRAC, August 2000

The Report focuses that tubewells have been tested for arsenic and the next logical step is to involve communities in highly affected areas in finding alternative sources of safe drinking water. This Project attempted to test different options of safe drinking water in the two upazilas. As very little was known about the effectiveness and acceptability of different safe water options at the beginning of the Project, it was essentially an 'action research' to assess the different options. This is the phase-ending Report for the 'Action Research on Community-Based Arsenic Mitigation' project for the period of June 1999-June 2000. The Report covers study results of testing, resource mapping and village meetings, treatment of arsenic-affected patients, and the installation, monitoring and evaluation of safe water options in the two upazilas.

## **Effectiveness of Field Methods for Detecting Arsenic Between 0 and 100 ppb in Bangladesh Groundwater**

*Prepared by:*

Ross Nickson  
Md. Zabed Hossain  
Md. Jakariya  
Nadim Khandakar  
AMR Chowdhury

*Published by:*

BRAC, November 1999

This Report highlights the compared study results of the Merck 'doubling method' and the Asian Arsenic Network (AAN) method, both of which claim to be able to measure arsenic at these critical concentrations, with results obtained in a laboratory by Atomic Absorption Spectrometry. Only wells which were identified in the field with the Merck normal method as greater than 0 but less than 100 ppb were tested. This was done for a total of 241 wells out of 2581 in Panisara Union of Jhikorgachha Thana. The results show that both methods correctly identify around 60% of the wells as having arsenic concentrations either greater than 50ppb or less than 50 ppb. The Merck 'doubling method' and the AAN method incorrectly identified 4% and 10% respectively as less than 50 ppb when they should have been greater than 50 ppb. These are 'false negatives' or a 'dangerous identification'; wells which would be painted green in the field indicating they are safe to drink from when in actual fact they should be red or

unsafe. This level of error is unacceptable. Furthermore, the two methods would have incorrectly identified 36% and 26% respectively as greater than 50 ppb when they should have been less than 50 ppb. These are false positives or 'wasted' wells i.e. they would have been painted red in the field when they should have been green. The Study recommends that the 'Arsenator' being developed by Water Cosmos may have potential as a field instrument in future.

## **Groundwater Arsenic Contamination in Bangladesh**

***Prepared by:***

-School of Environmental Studies  
Jadavpur University  
-Dhaka Community Hospital

***Published by:***

-School of Environmental Studies  
Jadavpur University, Calcutta, India  
-Dhaka Community Hospital  
Dhaka, Bangladesh, April 2000

This Survey Report reveals that even after working 239 days in Bangladesh from August 1995 to February 2000 the survey team felt that only the tip of the iceberg of the actual calamity has been seen. During the survey, each time the survey team got fresh information about new arsenic affected police station and villages. After about 5 years field survey in Bangladesh, it may be said without any shred of doubt that the arsenic calamity in Bangladesh is the largest in the world. The magnitude of the problem in Bangladesh surpasses the aggregate problem of all the 20 countries of the world where arsenic contamination of groundwater contamination has been reported. This Report focuses on the study findings that so far 833 deep hand tubewells had been analyzed for arsenic from all over Bangladesh and in 181 samples arsenic has been found above 0.01 mg/L and in 76 samples arsenic has been found above 0.05 mg/L. It is recommended in the Report that a detailed survey on Bangladesh is needed to know the actual magnitude and severity of the problem in the country.

## **Household Level Arsenic Removal Methodologies: Passive Sedimentation, Bucket Treatment Unit and Safi Filter**

*Prepared by:*  
Elizabeth M. Jones  
Md. Nasir Uddin

*Published by:*  
WaterAid-Bangladesh, March 2000

This Report documents the research results to be used as an indication of processes occurring. The Report highlights that the Study was conducted as a preliminary step to determining what further research might be undertaken at household level arsenic mitigation technologies. The results of this Study have been documented in the spirit of partnership, for sharing with other organizations and institutions that are involved in the search for appropriate and effective arsenic mitigation measures. The Report focuses that the other actors may use the results of this Study as an input to initiate and assist in the design of further research. This Research tested a total of 9 Safi Filters, 10 bucket treatment units and 17 passive sedimentation tests. This document is based on results from this small sample size and should be used as a directional document for future research.

## **Interim Report Community Based Arsenic Mitigation Programme: Successes and Constraints**

*Prepared by:*  
Md. Jakariya  
Salma R. Haque  
Md. Zabed Hossain  
Ross T. Nickson  
AMR Chowdhury

*Published by:*  
BRAC, June-October 1999

The Report focuses that 97% of the population relies on groundwater for drinking and cooking purposes and it is estimated that one third of the country may have arsenic in the subsurface. This amount to many millions of people potentially at risk. The severity of arsenic poisoning, or arsenicosis, also varies depending on the length of exposure, the level of arsenic being ingested and the socio-economic status of the individual concern. This Report presents the findings of the "Action Research on Community Based Arsenic Mitigation" project and covers the original results of arsenic testing of tubewells in two unions only. These options were being assessed on several criteria: initial and running costs; ease of implementation, running and maintenance; continuity of supply; susceptibility of bacteriological contamination and acceptability to the community etc.

## **Monitoring Report Arsenic Testing Programme at Hajiganj Thana**

*Prepared by:*  
Md. Jakariya  
AMR Chowdhury

*Published by:*  
BRAC, 1998

The Report focuses the main objectives of the study, which were to assess people's perception about arsenic and its remedial measures and also to understand the problems faced by residents in adhering to the advice given on prevention of arsenic poisoning. This Report highlights the methodology applied in the study. Household survey and Focus Group Discussion methods were used for monitoring the programme at Hajiganj. A total of 30 villages were selected randomly from where questionnaire survey was conducted in 210 randomly selected households. Information was collected either from the household head or from the spouse using a simple questionnaire. Later on, 10 villages were selected for Focus Group Discussion. Very few villagers were found following the advice, which were imparted to them during arsenic testing. Therefore, the Report recommends that strong motivational programme as well as an effective, affordable and practical method would be needed to avoid this national calamity.

### **Project on Building Community Based Arsenic Mitigation Response Capacity in Three Sub-districts Development of Outlines for the Training Modules**

*Prepared by:*  
Rafiqul Islam Khan  
Md. Shahidul Islam

*Published by:*  
DPHE, WHO & Unicef-Bangladesh  
February 2001

This Report is the result of the two workshops which were an initiative to collect and review all the training modules/manuals on arsenic developed by different organizations and draw up an outline of the existing training curriculum and further needs. The Report highlights the major contents and possible sub-contents of the training modules and different target participants. The Report focuses on concepts and present situation of arsenic contamination, possible sources of arsenic in the environment, effects of arsenic, patient identification and management, testing of arsenic in water, alternative sources of safe water, arsenic removal options, community management, communication and awareness raising, monitoring and evaluation. The Report

highlights the synopsis of the modules collected from different organizations, module-wise contents and sub-contents of the collected modules.

## **Village Health Workers Can Test Tubewell Water for Arsenic**

***Prepared by:***

AMR Chowdhury  
Md. Jakariya  
Md. Ashiqul H. Tareq  
Jalaluddin Ahmed

***Published by:***

BRAC, March 1998

This Publication highlights that the discovery of arsenic in groundwater in several parts of Bangladesh has aroused widespread concerns due to its potential health effects and social consequences. This Report presents two studies conducted by BRAC on the level of arsenic contamination in tubewell water. The suitability of village-based workers' capacities in large scale testing campaign is highlighted. The broad objective of the testing programme was to determine the level of arsenic concentration in hand tubewells of all BRAC field offices in different parts of Bangladesh and all tubewells of Hajiganj thana and thereby develop a simple, inexpensive and rapid arsenic testing methodology. To validate the results, a small proportion of water samples were also tested at the government laboratory using spectrophotometer.

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# ***HYGIENE***

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## **Completion Report of the Social Mobilization Programme**

*Prepared by:*  
Unicef-Bangladesh

*Published by:*  
Unicef-Bangladesh, 1999

This Report highlights that drinking of safe water alone is not sufficient to induce significant decline in under five mortality and morbidity, use of safe water for all purposes, improvement of environment through sanitary disposal of excreta, and adoption of safe hygiene practices are essential prerequisites. Changing people's attitude and consequent behavioural development is very critical. Such attitudinal change and behavioural development require sustained intensive social mobilization and motivational campaign involving various partners and allies. The Report shares the ins and outs of the SocMob Programme, and states the success of the Programme in details. The Report also marks a note that more focused and intensive intervention is required to achieve people's behavioural development in favor of safe water use for all purposes, sanitary disposal of human excreta and adoption of safe hygiene practices.

### **Curriculum Package (Module-3) Acharanbhattik Monitoring (Behavioural Monitoring)**

*Prepared by:*  
Rokon Uddin

*Published by:*  
CARE-Bangladesh, March 1999

This is a Training Module. In this Module the practical experiences of Sanitation and Family Education Resource (SAFER) Project implementation have been reflected, being implemented in Chittagong and Cox's Bazar districts for long 8 years. After the effective completion of the 2-day course following this Module the participants will get clear conception about behavioural monitoring, they will be able to contribute in developing and using behavioural monitoring tools for their own organizations, and also contribute in implementing participatory monitoring process in their own organizations. This Module is helpful and effective to those organizations or development activists who are interested in planning, implementation and monitoring of sanitation and hygiene behaviour related programmes at the community level.

### **Curriculum Package (Module-4) Bohubidho Channeler Byabohar (Use of Multiple Channel)**

*Prepared by:*  
Rokon Uddin

*Published by:*  
CARE-Bangladesh, March 1999

This is a Training Module. In this Module the practical experiences of Sanitation and Family Education Resource (SAFER) Project implementation have been reflected, being implemented in Chittagong and Cox's Bazar districts for long 8 years. After completion of the 2-day course following the Module the participants will be enabled for selecting effective channels for smooth flow of information in their own communities and will be able to contribute for proper utilization of those channels. The Module would be helpful and effective to those organizations or development activists who are interested in planning, implementation and monitoring of sanitation and hygiene behaviour related programmes at the community level.

**Curriculum Package (Module-5)**  
**Angshograhammulak Samprasaran**  
**Sahayak Koushal**  
**(Participatory Extension Method)**

*Prepared by:*  
Rokon Uddin

*Published by:*  
CARE-Bangladesh, March 1999

This is a Training Module. In this Module the practical experiences of Sanitation and Family Education Resource (SAFER) Project implementation have been reflected, being implemented in Chittagong and Cox's Bazar districts for long 8 years. After completion of the 3-day course the participants will get the basic idea on participatory extension technique for message dissemination process and get a guideline for using those techniques. The participants will also be able to conduct participatory session and to use the technique of extension methodology in session conduction. The Module would be helpful and effective to those organizations or development activists who are interested in planning, implementation and monitoring of sanitation and hygiene behaviour related programme at the community level.

**Field-Testing of Three Sanitation Stickers, One TV Spot on Hand  
Washing and Impact Evaluation of Sanitation Billboard**

*Prepared by:*  
M. Monzurul Haque

*Published by:*  
DPHE & Unicef-Bangladesh, October 1995

A number of communication materials have been developed to disseminate information and to raise awareness, and to educate and motivate people on the need of safe and clean environment and improved hygiene through behavioural changes. The sanitation stickers and TV spot have been developed and billboards have been erected in various locations in the country. Since field-testing is a precondition to prepare and present any communication material perceivable to the target audience, the testing of the stickers, the TV spot and the billboard have been made

appropriate to the audience. The audience reaction, suggestion, etc. are documented in the Report as the outcome of the field-testing and evaluation.

## **Final Report on the Qualitative Assessments Sanitation & Family Education (SAFE) Pilot Project**

*Prepared by:*

Sandra L. Laston  
Sumana Brahman

*Published by:*

CARE-Bangladesh, February 1995

This Report is the product of a collaborative effort between CARE-Bangladesh and ICDDR,B. This Report describes how information collected through multiple qualitative methodologies provided an assessment of the SAFE hygiene behaviour change interventions. The Report provides the background and synthesizes what the SAFE project did using qualitative techniques to develop the baseline questionnaire, refine the key interventions, materials and extension of the Project. It also provides the actual result of the information collected using qualitative techniques for the final evaluation of the SAFE project. This Report also provides useful information for programme managers administering health education projects. It is meant to help demystify and clarify anthropological techniques, which can be adapted and used to define and refine health or other types of programme interventions and techniques.

### **Hygiene Promotion**

#### *-- An Empowering Participatory Approach*

*Prepared by:*

WaterAid-Bangladesh

*Published by:*

WaterAid-Bangladesh

This Booklet shares a distinct approach and methodology that have been developed for the promotion of safe water, sanitation and hygiene behavior change. The approach includes participatory education materials on the relationship between safe water, sanitation and hygiene for improved health; for use by health educators, community development organizers, field workers, teachers and community volunteers. The Booklet describes the evolution and scope of this integrated, empowering, participatory approach to safe water, sanitation and hygiene promotion. This Booklet shares WaterAid's approach with all those interested in empowering communities to improve their health status by sustainable means.

## **Manobik Unnayan Proshikkhan Sahaika (Shasthya O Pushti Shikkha) (Human Development Training Manual)**

*Prepared by:*  
Training Division, Proshika

*Published by:*  
Proshika-MUK

This is a training Manual. It focuses that good health depends on good socio-economic condition. It describes importance of community and personal hygiene in preventing food and water-borne diseases. The Manual also explains bad effects and health hazards due to smoking, and in this regard discourages participants. It also classifies food and highlights the essentiality of these foods and gives direction about the types of food for 0-1 aged children. This training Manual helps participants to understand the importance of immunization and gives direction about whom, which and when to be immunized to protect children from various diseases. This Manual narrates a 4-day training course. The level of participants is group member(s).

### **Module on Hygiene Behaviour Change Programming Sanitation and Family Education Resource (SAFER) Project**

*Prepared by:*  
Dr. Dee Jupp

*Published by:*  
CARE-Bangladesh

This Hand Book under the headline of “Hygiene Behaviour Change Programming” in five volumes is developed and designed which focuses on the existing knowledge, attitudes and practices relating to water, sanitation and health hygiene and its reasons behind such practices among the community people. The Hand Book shows how to get into the community and get the community people involved in the problem solving and decision-making process as well. This Book leads to develop step by step support for behaviour changes, to ensure participatory involvement both on the part of the organization staff and the community people, and to develop participatory monitoring and evaluation in order to ensure that the mission is in the right track and, or if the mission needs any improvement/changes in the strategy and to gear up & groom up the organization involved in such mission along with the community people.

## **Nirapad Jiban (Safe Life)**

***Written by:***

Nafiz Uddin Khan

***Published by:***

Dhaka Ahsania Mission, April 2000

This is a continuing education material for neo-literate and persons with limited reading skills. The Book is written in Bangla. This publication has been initiated to impart education on personal hygiene practice, use of hygienic latrine and cleanliness. Process of preparing ORS has also been described in this education material. This material also describes about various diseases like diarrhoea, worm, skin diseases that occur due to lack of cleanliness. The Book is basically written in dialogue form with relevant and necessary messages and illustrations.

### **Prevention of Diarrhoea through Improving Hygiene Behaviours The Sanitation and Family Education (SAFE) Pilot Project Experience**

***Prepared by:***

O. Masee Bateman  
Raquiba A. Jahan  
Sumana Brahman  
Sushila Zeitlyn  
Sandra L. Laston

***Published by:***

CARE-Bangladesh & ICDDR,B, July 1995

This Report is the product of collaboration between CARE Bangladesh and ICDDR,B. CARE conceived and implemented the SAFE Pilot Project, and ICDDR,B provided technical assistance in anthropology and epidemiology. The Report focuses on the objectives of the SAFE project which are to develop effective and replicable hygiene education strategies to promote behavioural change, to develop and to assess different models for health and hygiene education outreach, and to design and implement a behaviour-based monitoring system for the hygiene education programme. This Report provides a summary of much of the work done in the project, presents the "SAFE approach," and evaluates the intervention. Recognizing the topic and findings are of most interests in diarrhoea prevention and behaviour change interventions, ICDDR,B has reprinted the original CARE report as a part of the Special Publication Series.

### **Quest for A Healthy Bangladesh -- A Vision for the Twenty First Century**

***Prepared by:***

Henry B. Perry

***Published by:***

The World Bank, 1999

Quest for a Healthy Bangladesh provides an overview of the Bangladesh health and population situation and the current status of its health and family planning programme with an emphasis on primary health care services. It reviews some of the major initiatives in health, population and nutrition which are emerging and considers how primary health-care services can be strengthened in Bangladesh so that “health for all” can become a reality in Bangladesh sooner rather than later. The Book provides an in-depth assessment of numerous health and family planning activities underway in Bangladesh. Some emerging activities and challenges, which lie ahead are discussed in the Book.

## **Report on the Baseline Survey Sanitation & Family Education (SAFE) Pilot Project**

*Prepared by:*  
O. Masee Bateman

*Published by:*  
CARE-Bangladesh, September 1993

This Report grew out of a discussion paper produced in May 1993, and subsequent presentations and discussion of the baseline results. The Report is organized with an Introduction, Methodology, Results, Baseline Values for Evaluation Indicators, and Conclusions & Recommendations. In order to balance a complete Report for those interested in details of the statistical procedures and significance tests with the need to keep the Report “user friendly” for the non-specialist, the body of the Report contains summary figures and tables. For those working in water, sanitation, and hygiene behaviour change projects, this Report presents a model and lessons learned. This Report focuses on a hygiene education project, the approach is applicable to any project where behaviour change is the key objective. This Report should be useful to policy-makers, programme planners and managers, and others interested in setting programme priorities, designing culturally appropriate programmes, developing monitoring systems, and designing pilot projects.

## **Samity Bhittik Proshikkhan Sahaika (Shasthya Shikkha) (Cooperative-based Training Manual - Health Education)**

*Prepared by:*  
Training Division, Proshika

*Published by:*  
Proshika-MUK

This is a training Manual. The Manual describes about diarrhoeal diseases and the preventive measures in order to educate the participants in the training course. It explains the importance of safe water, hygienic latrine and hygiene habit in order to keep sound health and focuses health hazards and bad impacts of smoking. The Manual also explains the importance of nutritious food, necessity of iodine in human body, immunization of mother and child,

necessity of breast-feeding to ensure sound health of the baby, arsenic contamination in groundwater and its mitigation measures, first aids and how to involve disabled persons in development activities. The Manual comprises of these contents elaborating an 11-hour training course and participant's level is primary group member(s).

## **Shasthya Katha (Health Messages)**

*Prepared by:*  
Mohammad Kamaluddin

*Published by:*  
ARBAN, June 2000

This Book is published with the objectives of giving health messages for the community people. The water-borne diseases like cholera, diarrhoea, dysentery, jaundice, worm, typhoid, scabies, etc. are introduced in this publication. The ways of getting remedy from these diseases are also described. The Book gives an overview about safe water and its sources, use of sanitary latrine, personal hygiene practice, mother and child health, health hazards due to smoking and provides some emergency health messages. The Book has colourful illustrations to support the discussed issues.

## **Shasthya Paricharjar Jannya Udbuddhokaron Bishaiak Proshikkhan Sahaika (Training Module on Hygiene Promotion)**

*Prepared by:*  
Training Cell, NGO Forum for DWSS

*Published by:*  
NGO Forum for DWSS

This is a Training Module on Hygiene Promotion, designed for field level staffs of partner NGOs to develop their knowledge and skill on how to conduct the promotional activities as well as how to use communication materials for behavioural change. The Module for the 6-day training course comprises of the following contents: i) Goal, objective and component of WatSan; ii) Present status of WatSan and the concept and importance of environment problem, safe water, hygienic latrine, cleanliness; iii) Motivation and its strategies; iv) Process of communication, barriers of communication; v) Concept of communication material and their use; vi) Role of development worker on conducting communication and motivational activities and material use; and vii) Presentation skill development.

## **Shasthya Shikkha Bishaiak Ekdiner Proshikkhan Module Somuho (Modules for One-Day Training on Health Education)**

*Prepared by:*

*Published by:*

This publication is consisted of six training Modules. The first Module is on “Smoking and tobacco creates serious health hazards”. In this Module bad effects to human health due to smoking and tobacco intake have been explained. The second Module is on “Safe Water, Hygienic Sanitation and Cleanliness”. In this Module importance of safe water, sources of safe water and hygienic sanitation issues are described. The third Module is on “Food and Nutrition”. The other three Modules are on health issues which are helpful for facilitating the health related course effectively.

## **Two Studies on Health Care-seeking Behaviour and Household Sanitation Practices of BRAC Member and Non-member Households in Matlab, Bangladesh**

*Prepared by:*  
Syed Masud Ahmed  
Mustaque Chowdhury  
Abbas Bhuiya

*Published by:*  
BRAC, 1998

This publication is a Study Report which was done under the auspices of BRAC-ICDDR,B joint research project, Matlab. The Report highlights two particular issues that are on ‘Health care-seeking behaviour of BRAC member and non-member households: evidence from Matlab, Bangladesh’, and ‘Household sanitation and hygiene practices of BRAC member and non-member households: evidence from Matlab, Bangladesh’. The analysis was done in two stages: first, bivariate analysis is done to compare and contrast the morbidity prevalence and health care-seeking behaviour of BRAC member and non-member households. Then, a logistic regression was run to identify the predictors of specific types of health care-seeking behaviour of the study population.

The Report highlights the results that 16% among the total population were found to have had illness during the past 15 days. Reported morbidity was found to be less among those from BRAC member households than those from the eligible non-member households. There was no significant difference between illness profile among the study households. Literacy of household head appears to have a favourable influence on seeking health-care of any sort. It is recommended in the Study that health-care behaviour modification should be undertaken by Essential Health-care of BRAC-RDP to discourage treatment seeking from unqualified allopaths and faith healers and reduce gender discrimination in seeking health-care.



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# ***SANITATION***

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## **Amader Paribesh (Our Environment)**

*Written by:*  
Mamtaz Khatun

*Published by:*  
Dhaka Ahsania Mission, January 2000

This is a Follow-up education Book for neo-literate & persons with limited reading skills. In this Book, positive effects of tree plantation, reasons of environmental degradation and responsibilities of human beings for keeping safer environment have been highlighted. This Book is helpful for the readers to raise their awareness level of environmental sanitation and ensure a safer environment through vegetation and cleanliness.

## **Byakti Uddogey Porichalito Grameen Sanitation Kendro Byabosthapona Sahaika (Manual on Private VSCs)**

*Written by:*  
Md. Azahar Ali Pramanik

*Published by:*  
NGO Forum for DWSS, June 2001

*Edited by:*  
Rehana Akhter  
Abul Kalam

It is an operational Manual on Village Sanitation Centre (VSC). NGO Forum through its partner NGOs has established VSCs to provide sanitation facilities in the unserved and underserved areas. Establishment of VSC is not enough to promote sanitation to the rural people. Management and systematic operation of VSC are very important issues. This operational Manual on Village Sanitation Centre has been prepared in line to support in maintaining and keeping the VSCs in operation. The Manual provides detail information on pre-condition of VSC establishment, different types of latrine technologies, advantages and disadvantages of these latrines, production of different types of latrines and estimated cost, activities of VSCs, pre-conditions for relocation of VSCs, etc. This is an essential support material for the persons and NGOs involved in planning, implementing and managing VSCs.

### **Curriculum Package (Module-1)**

## **Sangkhyagato O Gunogato Tathya Sangroho Poddhoti (Quantitative and Qualitative Assessment Technique)**

*Prepared by:*  
Rokon Uddin

*Published by:*  
CARE-Bangladesh, March 1999

This is a Training Module. In this Module the practical experiences of Sanitation and Family Education Resource (SAFER) Project implementation in Chittagong and Cox's Bazar districts for long 8 years have been reflected. This is the Module of a 4-day training course. After successful completion of the course according to this Module, the participants will be able to actively contribute in collecting quantitative and qualitative information through conduction of surveys in their organizations. They will also get clear conception about the importance of integration of quantitative and qualitative information and get direction or guideline of quantitative and qualitative information analysis. The Module would be helpful and effective to those organizations or development activists who are interested in planning, implementation and monitoring of sanitation and hygiene behaviour related programmes at the community level.

**Curriculum Package (Module-2)**  
**Barta O Upakaron Unnayan**  
**(Development Matrix and Materials)**

*Prepared by:*  
Rokon Uddin

*Published by:*  
CARE-Bangladesh, March 1999

This is a Training Module. In this Module the practical experiences of Sanitation and Family Education Resource (SAFER) Project implementation have been reflected, being implemented in Chittagong and Cox's Bazar districts for long 8 years. The 3-day course, conducted following this Module, enables the participants to contribute in selection of necessary messages based on the quantitative and qualitative information and enables them to contribute develop and redesign low-cost and appropriate materials in the light of the selected messages as per the need of their own organizations. The Module is helpful and effective to those organizations or development activists who are interested in planning, implementation and monitoring of sanitation and hygiene behaviour related programmes at the community level.

**Dhamrai Thana - Ekta Safal Sanitation Proyas**  
**(Dhamrai Thana - A successful sanitation initiative)**

*Prepared by:*  
DPHE & Unicef-Bangladesh

*Published by:*  
Unicef-Bangladesh, April 1994

In 1992 Social Advancement Center (SAC) - an NGO with the financial support from DPHE & Unicef started a Sanitation Project at Kusura union of Dhamrai thana. The Project set a good example of success of sanitation programme within a year. Once sanitation coverage of these villages were under 7% but after a year of intervention each household installed a sanitary or improved pit latrine. This has come true due to the all out cooperation of the community

people. This Book describes about sanitation issue in detail and focuses project implementation strategy with the participation of the community people – both male and female.

## **Documentation of Various Latrine Technologies in Rural Bangladesh**

*Prepared by:*  
Salehuddin Ahmed

*Published by:*  
DPHE & Unicef-Bangladesh, February 1995

This publication is the Report of a comparative study on various latrine technologies with a view to promoting such low-cost technologies for the people of rural Bangladesh. Findings regarding the materials, cost, advantages and disadvantages of different types of low-cost latrines in use in rural Bangladesh are focused in this document. The Report highlights that in Bangladesh thousands of children's lives are lost every year in diarrhoeal diseases. The causes of such diseases are largely due to poor environmental sanitation and personal hygiene. The Report describes about all acceptable latrine technologies promoted in rural Bangladesh and presents the compiled detail data and specific information about types of latrine technologies promoted in rural Bangladesh and are accepted by the users.

## **Grameen Sanitation Kendro Hishab Byabosthapon Proshikkhan Sahaika**

**(Training Module on Village Sanitation Centre Accounts Management)**

*Prepared by:*  
Training Cell, NGO Forum for DWSS

*Published by:*  
NGO Forum for DWSS

This is a Training Module on Village Sanitation Centre Accounts Management, designed for accounts management related staff who have at least passed the HSC to enhance their knowledge in terms of accounts keeping and enhance their competence for WatSan programme implementation. The Module for the 4-day training has the following contents: i) Goal, objective and components of WatSan; ii) Types of hygienic latrine and production cost analysis; iii) Environment and WatSan; iv) Process and importance of accounts management; v) Important materials for VSC accounts preservation; vi) Different VS centre related formats i.e. application form, contract form and closing report form; vii) Bank transaction documents such as deposit book, pass book and check book; and viii) Different materials in accounts management, such as cash book, ledger book, store register book, documentation, etc.

## **Jalabaddho Paikhana Utpadon Paddhoti**

*Prepared by:*  
Proshika-MUK

*Published by:*  
Proshika-MUK

This document is a water-seal latrine production Manual. The Manual describes the characteristics and importance of water-seal latrine. The Manual also highlights various methods and technical know-how on producing and installing the water-seal latrines. The Manual narrates the required equipments and raw materials for water-seal latrine production and the process of production and installation is described in detailed.

## **Jalabaddho Paikhanar Ring-slab Pan-siphon Nirman Sahaika (Manual on Water-Seal Latrine Production)**

*Prepared by:*  
Development Communication Cell  
NGO Forum for DWSS

*Published by:*  
NGO Forum for DWSS  
April 1996

This is a Manual on production of ring, slab and pan-siphon of water sealed latrine, produced as production guide book. Production of ring, slab, and pan-siphon is a technical process. It has been observed from the experiences that the durability of latrines depends on appropriate technology, technical knowledge and skill of the mason. This support material has been developed to increase the skill of mason. Information on required raw materials, appropriate proportion of raw materials and the steps of production of water-seal latrines have been provided in the Manual with photographs. This production Manual can be utilized as support material in VS mason training. The VS masons will also be able to get a clear idea and necessary information on production process of water-seal latrine in this Manual.

## **Kom Khorochey Shasthya Sammato Paikhana (Low-Cost Hygienic Latrine)**

*Prepared by:*  
DPHE , WHO & Unicef

*Published by:*  
DPHE, WHO & Unicef-Bangladesh  
May 1993

This Manual describes the importance of using hygienic latrines, the process of producing low-cost hygienic latrine and use of these latrines. Details about installation, use and maintenance of three types of latrines (home-made pit latrine, offset pit latrine and water-seal latrine) have been depicted in the Manual. Though water-seal latrine is the best kind of latrine, yet the other two kinds of latrines have been described for the convenience of those who cannot afford to buy

water-seal latrines. The Manual shows how to select the place, use of tools and necessary works in relation to production of hygienic latrines. The process of making latrines is nicely depicted in this Manual with illustration so that latrine masons can use it effectively.

## **Needs Assessment for the Sanitation Programme**

*Prepared by:*

Associates for Community  
and Population Research

*Published by:*

DPHE & Unicef-Bangladesh  
May 1993

This Report focuses that despite a remarkable success in the provision of safe drinking water in Bangladesh, faecal pollution of the environment and poor hygienic practices continue to transmit diseases. With the growing realization of this, the sanitation programme has adopted an integrated approach that includes promotion of an expanded use of tubewell water, hygienic defecation practices, and improved personal hygiene. This Report describes that although the sanitation programme has been expanded in the number of latrines produced and sold, but the GOB recognizes that the current strategy alone will never achieve the target of full sanitation coverage. A few of the innovative ideas have been discussed in the Report, which are suitable for the poor, lower-middle class population. From the cost and durability considerations, a slab latrine is most suitable. The Report highlights on the strengths and weaknesses of the different types of programme undertaken so far and to make contributions to strategy development for the sanitation programme.

## **Private Producerder Shasthyasammato Paikhana Taireetay Dakkhota Unnayan Proshikkhan Sahaika (Training Module on Low-cost Latrine Production for Private Producers)**

*Prepared by:*

Training Cell, NGO Forum for DWSS

*Published by:*

NGO Forum for DWSS

This is a Training Module, designed for private producers to enhance their knowledge on latrine production of different types of technologies to supply to the people at minimum cost. The Module of this 5-day training course comprises of the following contents: i) Safe water, hygienic latrines and cleanliness; ii) Present WatSan situation; iii) Useful materials to prepare hygienic latrines of different technologies; iv) Hygienic latrine installation (theory and practice); v) Cost analysis of latrine installation; and vi) Hygienic latrines' use and maintenance.

**Report of a Comparative Study between SMC and  
DPHE Contractor**  
**Constructed Facilities under School Sanitation Programme in Noakhali  
District**

*Prepared by:*

M/s Nizam Consulting Associates  
(Dr. Nizam Uddin Ahmed, PhD, as Team Leader)

*Published by:*

Unicef-Bangladesh  
May 1998

The Report contains the results of a comparative study on water and sanitation facilities in the primary schools in Noakhali district. The Report contains the findings on construction quality and operational status of facilities done by SMCs and DPHE contractors, effects on KAP at school level, behavioural development/change at community level, etc. Some CONTROL cases (schools) are defined in the Report as those where water and sanitation facilities were provided by the Facilities Department/LGED, and Unicef participation was limited to distribution of nail-clippers and de-worming tablets only. The Report is divided into seven chapters including recommendation and conclusion.

**Review of the On-going Sanitation Activities in Sylhet, Rangpur,  
Tangail and Satkhira Towns**

*Prepared by:*

A.F.M. Khalid Hassan

*Published by:*

WHO-BAN-PHE-001, October 2000

This Report focuses on the review of the on-going sanitation activities in Sylhet, Rangpur, Tangail and Satkhira towns. The Report includes four case studies on slums of Sylhet, Rangpur, Tangail and Satkhira towns. The Report highlights that slum dwellers are lacking hygiene education due to inadequate strategic planning, conceptual framework and communication materials. In some cases essential components were present, but were not used in proper way. The Report includes a set of recommendations for improvement in the water supply & sanitation sector.

## **Sanitation Training Curricula Review/Needs Assessment**

*Prepared by:*  
Development Planners & Consultants

*Published by:*  
DPHE & Unicef-Bangladesh  
May 1994

This Report categorizes the study findings from secondary sources in one group and those from the primary sources in another. The existing training curricula and support materials developed or used by concerned agencies and organizations have been reviewed. The existing materials that have been scanned include curricula, training contents, training calendars, announcements, programmes and session guides, monitoring and evaluation reports; interviewed policy-makers, core and field trainers; focus group discussions with beneficiary groups and observed training sessions and facilities. The Report highlights the findings that curricula of technical institutions are hardware oriented and use the conventional western approaches to sanitation projects. The Report also contains that the messages conveyed through development communication materials are not always uniform. The Report focuses on the need of development of a common training curriculum at the grassroots level for the field workers and a resource library for training as the key officials and field workers are involved in implementation of curriculum in the field of sanitation training.

### **Shasthyasammato Paikhana (Sanitary Latrine)**

*Written by:*  
Mamtaz Khatun

*Published by:*  
Dhaka Ahsania Mission, December 2000

This is a continuing education Book for the neo-literates and persons with limited reading skills. This Book describes various diseases such as diarrhoea, cholera, worm and water pollution due to open defecation. This Book describes the threats posed to our environment and health due to open defecation and open latrines. This Book also highlights the necessity of using hygienic latrines. This Book helps for site selection for installation of sanitary latrine, and also describes different advantages of hygienic sanitation, types of hygienic sanitation, process of installing pit latrine and water seal latrines, and the process of using and maintenance of hygienic latrines. The necessary messages and information are projected with relevant illustration in the Book, which is very helpful for motivating the target readers.



## **Shasthyasammato Paikhana Rakkhanabekkhana Sahaika (Hygienic Latrine Maintenance Manual)**

***Prepared by:***

Development Communication Cell  
NGO Forum for DWSS

***Published by:***

NGO Forum for DWSS  
September 1997

Hygienic Latrine Maintenance Manual is a guide book on keeping latrine and surroundings of latrine clean and hygienic. Hygienic latrine is the pre-requisite for healthy life and environment. To ensure this, latrines at the household level should be properly maintained and kept clean. This Manual has been developed and produced to address the issue. The Manual has been designed with a total of ten instructions. The themes of the instructions, through appropriate photographs, and how to maintain and keep a latrine clean and hygienic. Instruments required for cleaning are also introduced through photographs. In addition, messages on hygienic sanitation are disseminated through the Manual. This has been developed for the latrine users at the community level both male and female and the field workers engaged in WatSan programme.

## **Shasthyasammato Paikhana Toireetay Dakkhota Unnayan Proshikkhan Sahaika (Training Module on Low-cost Latrine Production)**

***Prepared by:***

Training Cell, NGO Forum for DWSS

***Published by:***

NGO Forum for DWSS

This is a Training Module, designed for members of partner NGOs and private latrine producers. The Module for this 8-day training course is designed with a view to enriching partners' knowledge on hygienic latrines and types of latrines and personal, domestic and environmental cleanliness. The Module is comprised of the following contents: i) Present WatSan situation and polluted environment; ii) Notion and importance of safe water, hygienic latrines, personal, domestic and environmental cleanliness; iii) Hygienic latrines and their classification; iv) Different types of hygienic latrine installation (Ring-Slab, Pan-Siphon); v) Latrine installation (theory and practice); vi) Cost analysis of latrine installation of different technologies; and vii) Use and maintenance of hygienic latrines.

## **Status of the Primary School Sanitation Survey**

**(A study on 2,422 schools of 14 thanas of Chandpur, Comilla, Noakhali, Sylhet and Moulvibazar)**

***Prepared by:***

Dr. Tofail Ahmed, Associate Professor  
Department of Public Administration  
University of Chittagong

***Published by:***

Unicef-Bangladesh  
October 1994

The Survey Report focuses on proper sanitation and access to safe drinking water, which are two of the very basic human needs. But many of the rural primary schools still could not ensure these basic needs in Bangladesh. Unicef undertook the survey on the sanitation status of the primary schools with the intention of building necessary infrastructure to develop primary school sanitation system. The Report presents the survey results of 2,400 primary schools of fourteen selected thanas of the then Chittagong division spread over to five districts, namely, Chandpur, Comilla, Noakhali, Moulvibazar and Sylhet. The summary of then sanitation situation is given in the tables and thana-wise status of every single school is shown in the Appendices of the Report.

### **Studies on the Inputs of BRAC in Matlab: Sanitary latrines, training, monthly meetings, legal awareness and credit**

***Prepared by:***

BRAC-ICDDR,B Joint Research Project

***Published by:***

BRAC, 1996

The Report highlights on the study findings that RDP sold a large number of latrines as part of a drive to improve rural sanitation. The Study aimed to investigate what happens to the latrines sold by RDP with respect to installation and use, and the reasons behind; to assess the differences in household latrine installation and use according to BRAC eligibility status; and to explore the level of awareness about the benefits of the slab latrine and their maintenance. The Report contains 5 Chapters on different working papers. The first chapter focuses the current status of the latrines sold by RDP in Matlab. The second chapter highlights the process of capacity development of VO members through training and other inputs of RDP. The third chapter aimed to understand and document the process of monthly issue-based meetings. In the fourth chapter the total process of HRLE P (Human Rights and Legal Education Programme) training at Matlab has been explored. The fifth chapter aimed to provide a preliminary understanding of the credit programme in Matlab.

## **Study of Sale and Performance of One Slab-One Ring Latrines**

*Prepared by:*  
DPHE, WHO &  
Unicef-Bangladesh

*Published by:*  
DPHE, WHO & Unicef-Bangladesh  
February 1991

This publication reflects the Survey Results on sale and performance of one slab-one ring latrines. The Report introduces latrine sale mechanism in subsidized rate to the poor to meet demands as well as to achieve greater sanitation coverage, one slab-one ring latrine along with other options. The acceptance of one slab-one ring latrine in the society requires understanding of the system by the users. The Report focuses on the structural stability of one slab-one ring latrines with different foundation in different types of soil. The foundation of any form for the latrine in clay worked better than those in other types of soil and the foundation with 3 bricks below the ring is supposed to be appropriate. The Report highlights that the number of latrines built with 1 slab-1 ring in built up area is less than those in high plain land and gives an idea of the percentage of households spending money for additional rings.

## **Study of the Performance of Mobile Village Sanitation Centres Operated by DPHE, NGOs and Private Producers**

*Prepared by:*  
DPHE, WHO, Unicef & SDC

*Published by:*  
DPHE, WHO, Unicef & SDC  
January 1997

This Report is the outcome of the Study conducted to assess overall performance of the mobile VSCs operated by DPHE, NGOs, PPs, and Chittagong Hill Tracts Development Board and their effectiveness in the improvement of sanitation coverage. The Report focuses on the Study findings that NGOs and private producers were concerned with low-demand of latrine and insufficient fund for the initiation of mobile center. They need market development and loan for the purpose. Market survey was considered for establishment of mobile centers in one-third of the cases in DPHE while in NGOs it was 40%. Union Parishad supported DPHE only with

storage facility. NGOs and private producers had their own storage facilities. The Report highlights that the mobile centre should be located in market place, and social mobilization campaign should be initiated before establishment of mobile centre.

## **The Impact of Social Mobilization for Sanitation on the Private Producers**

*Prepared by:*

DPHE, WHO, Unicef & SDC

*Published by:*

DPHE, WHO, Unicef & SDC  
February 1996

This Report looks into the underlying causes resulting in the emergence, growth and success of the private sector in the field of sanitation and explore ways of sustaining and revitalizing the trend. The promotion of the private sector will ease the burden on the DPHE and enhance sanitation coverage. The Study has assessed the impact of the campaign and changes which occurred therein and the growth of the private sector as well as the private producer's perception of the campaign and generation of demand for latrine components. The Report highlights on the Study findings that include about 55% of the households that currently possesses sanitary latrines had pit latrines before-hand. Some 35% of the current sanitary latrine users have switched over from a hanging/open latrine type or no latrine to sanitary latrines. Some 64% of the households which possessed ring-slab latrines, had selected private producers as their source of procurement; 33% of them bought from DPHE.

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# ***WATER***

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## **A Guide to the Establishment of Community Owned and Managed Urban Water Points**

*Prepared by:*

DSK & WaterAid-Bangladesh

*Published by:*

DSK & WaterAid-Bangladesh

March 1999

The Guide gives an introduction to the water component of WaterAid's programme in Bangladesh focusing on the work of DSK and their model for providing water to slum communities in Dhaka. It contains all the project steps with detailed diagrams to guide the reader through the process of establishing a water point. The Guide documents the essential pre-requisites for a successful program. This includes guidance on carrying out a baseline study of the community and the hygiene education that must accompany any water point construction program. It provides the reader with technical support and information about the design of the water points. Costs of components and services are also included. The Manual describes options for cost recovery of urban points to ensure sustainability of the program. It details some of the lessons learnt so far with respect to dealing with various authorities, the community and other influential groups. This Guide contains features on the handing over of management of urban water points to the community.

## **A Monitoring Report on Qualitative Performance of Tara Hand Pump Tubewells**

*Prepared by:*

Unicef-Bangladesh

*Published by:*

Unicef-Bangladesh, November 1992

This Report gives sharper focus on the qualitative aspects of Tara hand pump tubewells installed during the period of 1991-92 fiscal year. This Monitoring Report of 744 Tara hand pump tubewells represents very close to 5 percent of total 15,000 Tara tubewells sunk during 1991-92 fiscal year. In presenting the qualitative performance of the pumps the Report describes the status of site selection criteria, performance level and different causes of defects and other problems. Some recommendations are also mentioned in the Report to make the Tara hand pump tubewells well functioning.

## **An Independent Survey to Assess Performance of the Tara Hand Pumps**

*Prepared by:*

Bangladesh Engineering &  
Technological Services (BETS)

*Published by:*

Unicef-Bangladesh

July 1997

This Survey Report focuses on the performance of Tara hand pumps based on the working condition of those considering various age groups; installation locations (urban or rural); and different hydro-geological conditions consisting of low-water table, seasonal low-water table and shallow water table areas. The majority of the Tara hand pumps surveyed is of non-extractable type. The Report shows that 72% of the extractable model Tara hand pumps in the low-water table area were in perfect working condition as opposed to only 52% in the shallow-water table area. Again in the non-extractable model shows a better performance level here albeit in a reverse order. Eighty two percent of hand pumps were found in working order in the low water table area, 4% less as was observed in shallow water table area. The Report highlights that users participation is very important for the promotion of Tara hand pump.

## **Annual Training for Tubewell Mechanics**

*Prepared by:*  
DPHE & Unicef-Bangladesh

*Published by:*  
DPHE & Unicef-Bangladesh, 1995

This document is the result of the efforts taken for making a training Manual for the Sub-Assistant Engineers and Tubewell Mechanics of DPHE more meaningful, attractive and effective. This Manual elaborates the tools and techniques which can play a positive role in increasing knowledge and skill of both the facilitators and participants. As the basic components of improved life and primary health-care are safe water, developed sanitation and health habit, this Manual includes the technical side of safe water and sanitation system as topics. The techniques of discussion on participatory training method are also included in this Manual. This Manual is a potential one to play a positive role by helping the facilitators and participants to gain topic related knowledge.

## **Arsenic O Iron Bimuktokoron Projukti Sthapon Bishaiak Proshikkhan Sahaika (Training Module on Arsenic-Iron Removal Plant Installation)**

*Prepared by:*  
Training Cell, NGO Forum for DWSS

*Published by:*  
NGO Forum for DWSS

This is a Training Module, designed for selected staff of the organization and private mason to confer to them the knowledge of arsenic and training on iron-decontamination of water in order to enable them to construct and iron-decontamination technologies by themselves. The Module for the 7-day training course has following contents: i) Concept of safe water; ii) Arsenic and

iron mitigation technology repairing and use; iii) Installation of arsenic and iron mitigation technology; and iv) Cost analysis for construction of the AIRP.

## **Biological Contamination of Tubewell Water**

*Prepared by:*

Bilqis Amin Hoque

*Published by:*

ICDDR,B, September 1998

The Environmental Health Programme of ICDDR,B undertook a biological pollution study of tubewells with financial assistance from DFID. The Report focuses on the study objectives, carried out to determine which tubewells tested for arsenic contamination in the DFID funded sampling programme are free from arsenic contamination and to indicate the type and the extent of common biological contamination of tubewell water and relate this to the conditions of the well head. This Report highlights that more than half (54%) of the water samples from the studied tubewells did not meet the WHO standards. It is alarming and requires an immediate action. The study has clearly identified the DFID studied tubewells, which were biologically polluted at the time of sampling for this study. The concentration and level of pollution varied widely with location. Overall, the results presented may be considered as indicative about the biological pollution of tubewell water at national level. The Report recommends for appropriate studies for situation analysis, determination of risk factors and developing appropriate standards for Bangladesh.

## **Brishtir Pani Dharon Projukti Sthapon Bishaiak Proshikkhan Sahaika (Training Module on Rain-water Harvesting System Installation)**

*Prepared by:*

Training Cell, NGO Forum for DWSS

*Published by:*

NGO Forum for DWSS

This publication is a Training Module, designed for staff members and professional worker/experts to enhance their knowledge and skill on Rain-water Harvesting System installation. The Module of the 8-day training course comprises of the following contents: i) Concept of safe water and rain-water harvesting; ii) Introduction of materials and construction; iii) Chronological steps of tank installation; iv) Process of tank making (theory and practical); v) Curing (concept and clarification); vi) Consideration of site selection on tank installation; and vii) Process of use and maintenance.

## **Dakkhota Bishaiak Proshikkhan Chhak (Skill Development Training Module)**



*Prepared by:*  
Housing & Sanitation Department (Proshika)

*Published by:*  
Proshika-MUK

This is a training Module developed for enhancing tubewell installation skills of group members (beneficiaries). The duration of the course is 15 days. The Module is narrated based on the issues which help the facilitator and the participants analyzing their own socio-economic condition, relation between WatSan and environment, etc. in the practical point of view. The participants would be interested to undertake innovative activities for their family earnings being trained on tubewell installation. The Module describes every aspect step by step for all the 15 days.

### **Data Book 1999 (61 districts) (Urban Water Supply System)**

*Prepared by:*  
Dept. of Public Health Engineering (DPHE)

*Published by:*  
DPHE, August 2000

This Data Book is the analysis of the Water Supply Operations of a sample of 61 Paurashavas. In this Data Book financial, service and efficiency indicators have been incorporated. This Book compiles the data obtained from 61 towns i.e. all district towns. This attempt of compilation analysis of information in terms of performance indicators was done in order to enable DPHE to conduct in-depth study of Paurashavas functioning properly, document the lessons learnt and advise the sector accordingly. The Report presents the data in town specific information sheet. The information sheet presents a) general including technical status and b) presents service and efficiency indicators. This Report gives an overall picture and can be used to identify areas where interventions are required on priority basis.

### **Deep-set Pump Sthapon Bishaiak Proshikkhan Sahaika (Training Module on Deep-set Pump Installation)**

*Prepared by:*  
Training Cell, NGO Forum for DWSS

*Published by:*  
NGO Forum for DWSS

This is a Training Module, designed for professional private mechanics to raise their knowledge and skill on installation of deep-set pumps, which is appropriate especially for the low-water table areas. The Module for the 3-day training course comprises of the following contents: i) Safe water and sources of water; ii) Water-borne diseases and prevention; iii) Water level of underground water; iv) Water level appropriate for deep-set pump; v) Identification of arsenic problems; vi) Method and process of water level identification; vii) Platform construction and its importance; viii) Structure of platform and drainage system; ix) Name and function of

different parts of deep-set pump; x) Process of deep-set pump installation; and xi) Different problems and solutions during installation.

## **Design Parameters for Rural Water Supplies in Bangladesh**

*Prepared by:*  
Farooque Ahmed, BUET

*Published by:*  
Unicef-Bangladesh, October 1981

This Study investigates the pattern of rural water use, the factors affecting rural water consumption and appraises the need for improvement in the present rural water supply system in Bangladesh and the impact of such improvement on rural water use for the social and economic well-being of the rural community. This Study attempts to establish some design criteria like appropriate location of tubewell site, type of pump, platform dimensions, allowable chemical contents in tubewell water, the optimum number of users per hand pump, and the maximum distance of a tubewell from each household for the future water supply construction programme in rural Bangladesh. The Study indicates that the presence of other convenient unprotected sources of apparently acceptable quality reduce the use of tubewell water significantly where the tubewell water supply is associated with various problems. In the absence of other nearby sources people will usually collect tubewell water not only for drinking, but for other domestic purposes as well.

## **Evaluation of Performance of Women as Tubewell Mechanics -- A Feasibility Study**

*Prepared by:*  
Centre for Social Studies  
Dhaka University

*Published by:*  
DPHE & Unicef-Bangladesh  
March 1995

This publication is on a Feasibility Study carried out to evaluate the performance of women as tubewell mechanics appointed by the DPHE and posted in six different thanas of Bangladesh. This Report provides relevant information about their (women tubewell mechanics) work and performance level, their status and their acceptability by the community as well as the feasibility to recruit more women as tubewell mechanics. The Report focuses on the Study findings that increasing mobility and articulation by women mechanics are positive sign of social empowerment. In the field of social mobilization women mechanics have acquired a kind of social acceptance by the beneficiaries. They have easy access to village women for purposes of social mobilization rather than male persons. The Report shows that women mechanics perceive both advantages as well as in dispensing their duties.

## **Final Monitoring Report of 100 Mini Tara Hand Pumps in Gazipur District**

*Prepared by:*  
Sheltech Consultants (Pvt.) Ltd.

*Published by:*  
DPHE & Unicef-Bangladesh  
February 1995

This Report is based on an intensive field monitoring of 100 Mini Tara tubewells in Gazipur district, for the period of 23rd December 1993 to 31st December 1994. The Report shows the performance of tubewell that was assessed in terms of the functioning factors, i.e. discharge, leakage, operation, user's acceptability and ease of maintenance. The Study forecasts the declining groundwater level in Bangladesh, depicts that 54 percent of suction mode areas in 189 thanas and 62 percent areas in 217 thanas will turn to low-water table areas by the year 2000 and 2010 respectively. This will create a tremendous suffering for shortage of potable water in rural areas. The Report focuses that Mini Tara Hand Pumps may be installed in the low-water table areas. This will ensure the supply of safe potable water throughout the year in Bangladesh.

## **Hand Pump Financing Issues in Bangladesh** *-- An Exploratory Study*

*Prepared by:*  
S. Zahir Sadeque

*Published by:*  
The UNDP/World Bank, December 1995

This Report reflects the study result on Hand Pump Financing Issues in Bangladesh. The Report provides a basis for examining the existing policies and strategies of provisioning safe drinking water in rural areas of Bangladesh as well as to provide a basis for comparable studies in other parts of the study area. The Report includes rationale and objectives of the study, methodology and study sites, household strategies for access and use to HTWS: examples from villages, financing mechanism and their implementation and impacts of differences in financing mechanisms. The Report highlights that the government programme does not provide intermediation services to assist group formation, and HTW applications are often successful in proportion to applicants good relations with relevant officials. Although women are the primary suppliers of domestic water supplies and therefore the major beneficiaries of improvements in access to water they are seldom the owners.

## **Home-Based Drinking Water Purification: The SODIS Health Study/Assessment of the Current Setting in WPP (Final Report)**

*Compiled by:*  
Michael Hobbins

*Published by:*  
SWISS Tropical Institute, EAWAG & SANDEC  
July 2000

The serious threat to the health of over 50 million people through consumption of arsenic-rich well-water in Bangladesh calls for immediate action on various levels. Solar Water Disinfection (SODIS) is a simple method used at the household level to improve the microbiological quality of drinking water with the effect of sunlight and temperature which offers a simple, low-cost means to get arsenic-free water. A project named WatSan Partnership Project has been implemented in two districts of Bangladesh. Along with promoting safe WatSan, WPP project is interested to reduce the arsenic poisoning of people in these regions by promoting SODIS as one of the mitigational options. A SODIS Health Study has been conducted to gauge the technology's efficacy on diarrhoeal incidence. This Report presents the details on the study. Two field visits were made.

### **Iron Problem Area and Steps to Address the Problem Including Exploratory Drilling**

*Prepared by:*  
DPHE, Research and Development Division

*Published by:*  
DPHE, June 1996

This Report highlights on the findings of field survey that iron problem areas could not determine acceptable iron content aquifers for about 100 unions. The Report also determines acceptable iron contact aquifer depths for rural water supply for about 1000 unions of the 1230 identified iron problem unions. The Report focuses on the exploratory drilling results of Dhaka, Manikganj and Laxmipur districts. The Report highlights on the steps of addressing the problem.

### **Janani An Affordable Drinking Water Pump**

*Prepared by:*  
International Development  
Enterprises (IDE)-Bangladesh

*Published by:*  
IDE-Bangladesh  
June 1999

International Development Enterprises - Bangladesh (IDE-B), continues its journey to offer affordable appropriate technologies to the poor communities of rural Bangladesh. An addition to this effort is Janani – a low-cost Deep-set hand pump attempting to create access to water at the household level. The marketing of this new product is a help to the private sector to explore, engage and strengthen their economic and business efforts to develop meaningful services for the society. The Janani is an addition to the water supply technologies to improve the socio-economic condition of the marginal rural communities of Bangladesh through their environmentally sustained access to low-cost, appropriate technologies for irrigation and drinking water by fostering the sustained development of a quality, profitable market-driven delivery system. This publication, published on the eve of the launching ceremony of the Janani, contains details about the pump. The basic characteristics of the pump, its use, mode of operation, installation technique, maintenance and repair etc. are described in details here.

## **Jiban Deep-set Pump Specification**

*Prepared by:*

Arun K. Mudgal  
Karl Erpf

*Published by:*

WatSan Partnership Project, September 1999

This publication highlights on the Jiban Deep-set Pump and analyzes different spare parts of the Pump. The publication describes that the Jiban Deep-set Pump is suitable for lifting water from depths of 0 to 60 feet (20m). Pictures of different parts of Jiban Deep-set Pump have been drawn in this publication. The publication provides cost analysis of different spare-parts of the Jiban Deep-set Pump. The publication highlights on the merits of the pump.

## **Low-Cost Tubewell**

*Prepared by:*

International Development  
Enterprises (IDE)-Bangladesh

*Published by:*

IDE-Bangladesh  
October 1998

This Report focuses that since 1984, IDE-Bangladesh has developed and disseminated over 1 million low-cost manual irrigation device that can be divided into two categories: pump cost and tubewell cost. With the objective of providing a means by which to further reduce cost while maintaining discharge, IDE undertook the low-cost tubewell research project. The Report projected on the overall aim of the study which was to establish the technical specifications and operational parameters for optimal well diameter to supply an operable water supply device with equal water discharge for irrigation and drinking water purpose. This Report contains the proceedings and findings of the four phases of field-testing.

## **Mason Proshikkhan Sahaika** **(Rain-water Harvesting System-Training Module for Masons)**

***Prepared by:***

Md. Zillur Rahman  
Refatul Islam

***Published by:***

NGO Forum for DWSS  
SDC, March 2001

***Edited by:***

Abdul Motaleb  
Sakil Ahmed Ferdousi

This is a training Module designed for trainers so that they can use the Module for conducting the training sessions. The Module has been prepared with the following contents: Basic rules of rendering training service; Objectives and norms of the training course; Rain-water Harvesting System; Sources of water; Cleanliness; Advantages, necessity, use and maintenance of Rain-water Harvesting System; Various types of models of Rain-water Harvesting technologies; Materials and tools of preparing Rain-water Harvesting technology; Cost analysis in relation to building various types of models of RWHS; Process of setting RCC ring and Jar moulds, cement segment and practical exercises (building of cement segment, RCC ring, Tank, basement etc.). The Module is prepared based on the 8-day training course.

## **Monitoring the Tarapump: An Assessment of Functioning, Social Acceptability, and O & M System**

***Prepared by:***

Abdul Motaleb  
Shakil A. Ferdausi  
Syed Zahir Sadeque

***Published by:***

The UNDP/World Bank, May 1996

The publication focuses on the results, conclusion of the monitoring programme carried out to judge the Tara pump in user's acceptability and validation of its village level operation and maintenance concept. The availability of spares, current source and its demand were critically monitored at local condition. The Report focuses that the first wearing spares, frequency, and level of interventions required to make the Tara pump in operable conditions were monitored for assessment of functioning. The effects of caretaker's training and health & hygiene education impact were also monitored to assess the gender involvement particularly transferring the skills to women and thus ensuring the smooth Tara O & M system. The Report highlights that the community participation in O & M has been found increasing compared to the pre and post CTF training situation. Women are now more encouraged to take the responsibilities of O & M

and repair of TARA pump. The HTMP monitoring system is enhancing capacity building exercise for a sustainable rural water supply system in the low-water table area.

## **No.6 Nolkup Sthapon Manual (No.6 Tubewell Installation Manual)**

*Prepared by:*  
Maksudur Rahman  
Prasanta Kumar Saha

*Published by:*  
NGO Forum for DWSS

*Edited by:*  
Nurul Kabir  
A.R.M.M. Kamal

This is a Manual on proper installation of No. 6 Tubewell. WatSan experiences of NGO Forum shows that supply of safe water at the community level cannot be ensured only through supply of tubewell. It depends on appropriate site selection for installation, identification of water layer, proper installation of tubewell and construction of platform and bottom of tubewell. This Manual has been developed to address these issues. Information with appropriate photographs on tubewell sinking and installation such as materials required for installation, caution during boring period, directions for platform construction, etc. are provided in the Manual. This Manual is a training material for the tubewell sinking training course. Moreover, this also works as a boring guideline for the private masons who sink tubewell professionally.

## **No.6 Tubewell Meramot O Rakkhanabekkhon Nirdeshika (No.6 Tubewell Maintenance Manual)**

*Prepared by:*  
Development Communication Cell  
NGO Forum for DWSS

*Published by:*  
NGO Forum for DWSS  
December 1995

No.6 Tubewell Maintenance Manual has been developed explaining the know-how to repair and maintain tubewell properly. Due to lack of necessary technical knowledge and skill of tubewell users and caretakers, the tubewells become inoperative within a very short period. This Manual has been developed to help the caretakers to remember the technical aspects along with the training knowledge. In the Manual each and every parts of tubewell, its function and joining techniques of these parts have been shown through colored and bright photographs along with a short narration. The Manual is basically a support material for TW caretakers. It can also be utilized as training material for field workers and trainers.

## **No.6 Tubewell Parishkar Parichhannota Nirdeshika (No.6 Tubewell Cleanliness Manual)**

***Prepared by:***

Development Communication Cell  
NGO Forum for DWSS

***Published by:***

NGO Forum for DWSS  
December 1997

No.6 Tubewell Cleanliness Manual is a guide book on how to keep tubewell clean. In Bangladesh a large number of tubewells become inoperative only due to lack of proper maintenance and cleaning. This can be reduced through building awareness on keeping the tubewell clean and hygienic. Keeping this in mind, NGO Forum has developed the tubewell Manual on cleanliness. The Manual has been systematically designed with a set of colored photographs which gives the users a clear idea on how tubewell can be kept clean and hygienic. The Manual is a support material for field workers, tubewell users and caretakers. It can also be utilized as training material in caretakers training.

## **Nolkup Rakkhanabekkhan O Meramot**

***Prepared by:***

Village Education Resource  
Centre (VERC)

***Published by:***

Village Education Resource  
Centre (VERC)

This is a Training Manual, designed for Tubewell Caretakers. This Manual explains the use of safe water in all purposes, importance of sanitary latrines for ensuring primary health care, personal hygiene. The Manual explains the importance of safe water using, hygiene practice and importance of hygienic latrine. This Manual gives perception on different parts of tubewells and its repairing. The Manual is narrated based on a 2-day training course for developing the caretakers.

## **Operational Status of Pond Sand Filters**

***Prepared by:***

DPHE, WHO &  
Unicef-Bangladesh

***Published by:***

DPHE, WHO & Unicef-Bangladesh  
April 1998

This Report reflects the study findings that out of DPHE constructed 130 PSFs surveyed only 63 are in operation and 67 are not in working condition. The Report reveals that out of 63 operative PSFs filter chamber found clean in 48 PSFs. A good number of PSFs are out of order due to various reasons like design and construction defects, lack of CTF training, lack of proper maintenance, lack of repair, and success in the identification of location of sweet water lens and



the installation of deep tubewell in some areas etc. The Report shows that among the PSFs surveyed condition of drain is good in 48%, damaged in 30.5% and non-existence in 21.5% PSFs. The Report contains the study findings about the present status of PSFs and identified problems and possible solutions.

**Production Manual**  
**Mould for Rain-water Collection Jar and Tank**

*Prepared by:*  
DPHE & Unicef-Bangladesh

*Published by:*  
DPHE & Unicef-Bangladesh  
January 1996

This Manual contains information to assist manufacturers to achieve the high quality required by the purchasing agency and to minimize chances of rejection of the finished product by the inspector. This Production Manual contains specifications for the Suction Hand Pump, which will be referred to invitations to bid, purchase orders and other procurement documents. The Manual contains production drawings, which must take precedence over all information. Similarly, the most detailed parts' drawing will have precedence over assembly drawing. The Manual specifies quality assurance which will be carried out by the independent inspection agencies, appointed by the Purchasing Agency who will inspect during production and will conduct quality inspection of finished products before delivery. The Manual provides information for manufacturers to take necessary care and adopt appropriate measures to ensure the quality required for reliable performance and interchangeability of parts.

**Projukti Tattabadhayak Proshikkhan Sahaika**  
**(Training Module on Tubewell Caretaking)**

*Prepared by:*  
Training Cell, NGO Forum for DWSS

*Published by:*  
NGO Forum for DWSS

This is a Training Module on Tubewell Caretaking, designed for tubewell caretakers to impart them knowledge on operation and maintenance of tubewell. The Module focuses that different technologies have been installed in different areas in response to varying geophysical situation and constraints in order to ensure safe drinking water. This Training Module is designed to enrich the knowledge and know-how of tubewell caretakers who are selected from the beneficiary group on the proper operation and maintenance of different water supply technologies. The aim is to enable them take care of the minor problems of their water technologies.

**Pukurparey Balur Filter Sthapon Bishaik Proshikkhan Sahaika**

## **(Training Module on Pond Sand Filter Installation)**

***Prepared by:***

Training Cell, NGO Forum for DWSS

***Published by:***

NGO Forum for DWSS

This is a Training Module on Pond Sand Filter Installation, designed for staff members and professional workers/experts to impart them knowledge on installation of Pond Sand Filter. The Module contains the following contents: i) Safe water and source of water; ii) Process of water purification; iii) Water-borne diseases; iv) Advantage and importance of PSF technology; v) Name of different technologies of PSF and its function; vi) Different parts of PSF and their function; vii) Identification of the problem of PSF and their prevention; and viii) PSF installation, repairing, maintenance and cost analysis.

## **Report on Pilot Study on Cost-Benefit of Withdrawal of Choked up Shallow Tubewells**

***Prepared by:***

DPHE, WHO, Unicef & SDC

***Published by:***

DPHE, WHO, Unicef & SDC  
November 1994

This publication focuses that the choked-up tubewells which seem to be unlikely to be successfully revived on descending are withdrawn. The components that are fit for reuse are incorporated in new installations. In many cases all materials can not be withdrawn and components found unsuitable for reuse are added to the dead-stock. The Report shows the study findings that withdrawal of tubewells varying in length from 10m to 100m would cost Tk. 200 to Tk. 2,500 depending on the type of tubewell materials vis-a-vis the expenditure anticipated for the withdrawal should be the deciding factor in undertaking the withdrawal of a choked-up tubewell. The Report analyzes in the simplest form the cost-benefit of withdrawal of choked-up shallow tubewells. The Report focuses on the study objectives: study whether the withdrawal of choked-up tubewells is economically viable; and find ways of disposing of choked-up tubewells that are economically not viable.

## **Report on Study of Pond Sand Filters**

***Prepared by:***

DPHE, WHO &  
Unicef-Bangladesh

***Published by:***

DPHE, WHO & Unicef-Bangladesh  
March 1991

There are certain areas in the coastal belt, where tubewells are not successful, suitable aquifers at reasonable depths are not available and groundwater is saline down to depths 700-1000 feet; all surface water is grossly polluted. The areas of high water salinity are located in the southern fringes of Khulna, Barisal and Patuakhali greater districts. The people of these areas mainly depend on water from artificially dug ponds called "sweet water ponds", which are replenished by rain-water in the monsoon; but their number is not adequate and during dry season the number of users increases between 100-300%. The people generally use pond water for drinking and cooking purposes, but the water is dangerously contaminated and is not suitable for human consumption without treatment. This led DPHE-Unicef to concentrate their efforts to use a slow sand filter unit into which the pond water is fed by a hand pump. The quality of effluent water is significantly improved. The filter unit is termed as "Pond Sand Filter". The Study Report contains the findings of the test for bacteriological contamination in the PSF water and upholds some major findings and recommendations.

### **Social Inter-Mediation: Towards Gaining Access to Water for Squatter Communities in Dhaka**

*Prepared by:*  
Nilufar Matin

*Published by:*  
DSK, SDC, WaterAid-Bangladesh & WSP-South Asia  
May 1999

This Study Report describes experiences with social inter-mediation as an enabling strategy in gaining access to water for the low-income communities of Dhaka. The Report shows that the mediation became imperative, as the existing legal and procedural requirements of DWASA would not allow communities without land title to have formal access to water and sanitation services. The institutional denial of services to the urban slum and squatter residents has encouraged a parallel growth of an informal water market where the consumers pay an unregulated price as dictated by the supplier of the services. As the project developed, through the mediation of DSK, people, who did not have legal access to safe water prior to the intervention, gained access to reliable water supply services. The Report focuses on the assessment of the project experience in relation to the role and importance of advocacy and inter-mediation between formal service agencies and prospective user communities. It also highlights the need for capacity building within the user community for management, operation, and maintenance of a sustainable system of water supply.

## **SODIS Paddhoti Bastabayan Somporkito Proshikkhan Module** **(Training Module on SODIS Method Implementation)**

*Prepared by:*

Sakil Ahmed  
M. Ziauddin  
Abdul Motaleb  
Marin Oegalin

*Published by:*

WatSan Partnership Project, March 2000

This Training Module is developed for those who implement and use SODIS method at the grassroots level. Solar Water Dis-infection (SODIS) is a simple low-cost technology used at the household level to improve the microbiological quality of drinking water with the effect of sunlight and temperature. Thus it can also be used in arsenic free water source for drinking purposes. The Training Module deals with different issues, i.e. the objective and vision of the training, basic information about SODIS, the limitations of SODIS, things to remember for highest performance of SODIS, identification of turbidity of water and the method of removing it, what is right and what is wrong for SODIS method, the field level experience of implementing SODIS in Indonesia, how to implement SODIS method, the policy for SODIS method monitoring, planning for implementation of SODIS, Question and answer session.

## **Study Findings of Alternative Water Supply Technologies** **under** **Community Managed Water & Sanitation Programme**

*Edited by:*

Rabiul Islam

*Published by:*

NGO Forum for DWSS, December 2000

The general objective of the study was to establish alternative water supply technologies that ensure improved access to affordable and sustainable provision of safe water by the rural community in the coastal belt of Bangladesh. The study considers three alternative water supply technologies, i.e. Arsenic-Iron Removal Plant (AIRP), Pond Sand Filter (PSF) and Rain-water Harvesting System (RWHS). The Report highlights on the study findings that the AIRP plant water is socially accepted by the community people and they are using this water for drinking and cooking purposes. The bacteriological quality of some PSF plants were tested and found with bacterial contamination. The bacteriological quality of RWHS systems were tested and found with no bacterial contamination. Chemical (Ph) quality of water was tested in laboratory and found that the quality of water supplied from the technology is within the limit of WHO guideline value for drinking purposes. The overall response this Report contains about these three technologies from the beneficiaries is positive and they are also comfortable with their price.

## **Study of Rural Water Supply Installations Comparison between GOB and Unicef Funded Projects**

*Prepared by:*

DPHE, WHO, Unicef & SDC

*Published by:*

DPHE, WHO, Unicef & SDC, June 1996

The Report is a publication on the Study which was undertaken to compare DPHE's performance under the GOB funded rural water supply programme to its performance under the long established Unicef funded programme. The Report reveals that DPHE has been successful in supplying safe drinking water to the rural areas of Bangladesh under both programmes. Most of the tubewells installed by DPHE during last five years were found to be generally in a good condition. The water quality of tubewell appeared to be good except for a few coastal and northern regions where salinity and iron contents are relatively excessive. The Report focuses that the extent of involvement of CTFs and users in site selection varies with different technologies. In the case of STWs & TARA the involvement on the part of CTFs is proportionately much higher than the associated users but in the case of DTWs, PSFs and SSTs the users' involvement is higher.

## **Study on the Optimum Contribution from Beneficiary User Groups for Water Supply Installations**

*Prepared by:*

DPHE, WHO, Unicef & SDC

*Published by:*

DPHE, WHO, Unicef & SDC, May 1996

This publication is a Study Report. The Study aimed to estimate willingness to pay (WTP) for safe water among the rural households and the urban slum and fringe households of Bangladesh. The Report reveals the Study findings that the user-households of DPHE-organized drinking water systems belong mainly to the socio-economically disadvantaged groups i.e., landless and small farmer categories in the rural areas and manual workers in the urban areas. The sample households generally appreciate the value of drinking water systems vis-a-vis other socio-economic infrastructures i.e., education, primary health-care and public roads. The Report focuses that for an unhindered access to safe, potable water in adequate quantities, 50% of the urban households and 60% of the rural households are willing to pay monthly Tk. 10 or more.

## **Study to Forecast Declining Groundwater Level in Bangladesh Final Report (Executive Summary)**

***Conducted by:***

EPC Eng.& Planning Consultants Ltd., BD  
and MoH MacDonald Ltd., U.K.

***Published by:***

DPHE & Unicef-Bangladesh  
June 1994

This publication is based on the Executive Summary of the Study carried out to forecast declining groundwater level in Bangladesh. The study was carried out in a total of 349 thanas of Bangladesh. The publication focuses on large-scale abstraction of groundwater for irrigation use. Due to this, groundwater levels have been lowered in many areas rendering many tubewells fitted with suction mode hand pumps inoperable particularly during dry months. The publication also highlights a wide range of models and programmes, which were used, and developed as required to form an integrated package for predicting the impact of irrigated development on rural water supplies. According to the local hydrogeological conditions, these models can be equated with single or multiple layered aquifer conditions as applicable according to the aquifer conditions. The thana-wise final output of the model results have been documented as Data Report in favor of volumes.

## **Survey on Study for Rain-water Collection and Storage**

***Prepared by:***

Sheltech Consultants (PVT.) Ltd.

***Published by:***

DPHE & Unicef-Bangladesh  
January 1996

This Survey Report reveals that the people of the project areas have been drinking rain-water since long. People drink rain-water in the rainy season, but in the dry season they hardly drink rain-water due to lack of storage facilities. The Report shows the summarized socio-economic survey results of the three study areas which depicts the Demographic Socio-economic Profile and Knowledge, Attitude and Practice (KAP) Profile on Rain-water Harvesting. The socio-economic status of the people in the project area is as of other coastal areas of Bangladesh with mixed income group of rural people. The Report focuses that existing water use practice is that, about 85% people use river, canal, pond water in coastal belt, while 90% use rain-water at Swalak and 100% use spring water at Rajasthali, but almost all have knowledge on rain-water and store rain-water for use. Very few are interested to have methodical storage facilities participating with contribution. This Report gives a picture of the living condition of the household heads with his/her economic conditions.

## **Tara Hand Pump Production Manual**

*Prepared by:*  
DPHE & Unicef-Bangladesh

*Published by:*  
DPHE & Unicef-Bangladesh, May 1997

This Manual contains specifications for the Tara Hand Pump which are helpful to refer to invitations to bid, purchase orders and other procurement documents. It contains production drawings, which take precedence over all other information. Similarly, the most detailed part drawing will have precedence over assembly drawings. This Manual specifies quality assurance which will be carried out by the Inspectors appointed by the Purchasing Agency who will inspect during production and will conduct final quality inspection of completed product. This Manual provides an aid for manufacturers to take necessary care and adopt appropriate measures to ensure quality mass production required for reliable performance and interchange-ability of parts.

## **Tara Pump Caretaker Families' Training Module**

*Prepared by:*  
Development Planners &  
Consultants (DPC)

*Published by:*  
DPHE & Unicef-Bangladesh

This Module is a tool to enhance the knowledge and skills on various technical aspects of Tara Pump, and to disseminate health messages to rural people. This Module can assist the trainers to conduct the training courses with participatory approach. The Module is basically used by the trainers to conduct Tara Pump Caretaker Family Training. The Module contains 3 Chapters: Chapter I describes how the trainer would use the different techniques, methods and materials in order to make the training effective, details the following topics: safe water, sanitary latrines and personal & domestic hygiene and the technical information intended for the CTF. The Chapter II deals in detail, the responsibilities of the trainer, training management, training materials, training schedules and justification of following it for conducting the different sessions according to schedule. The Chapter III describes the responsibilities of the trainer, training management, training materials, training schedules, and justification of following it for conducting the different sessions according to schedule.

## **Tatabadhayak Proshikkhan Sahaika (Rain-water Harvesting System-Caretaker's Training Module)**

*Prepared by:*  
Md. Zillur Rahman  
Refatul Islam

*Published by:*  
NGO Forum for DWSS  
SDC, March 2001

*Edited by:*  
Abdul Motaleb

Sakil Ahmed Ferdousi

This is a training Module designed for trainers so that they can get help from this Module for the conduction of the training sessions. The Module has been prepared with the following contents: Objectives and norms of the training; Physical fitness and its essentiality; Safe water and water-borne diseases; Arsenic issue; Sanitary latrines and environment; Rain-water Harvesting Technology; Introduction to the different parts of Rain-water Harvesting System, functions of those parts and problems, and its solution; Practical exercises; Duties and responsibilities of the caretaker; and Review, evaluation and conclusion. The Module also includes training schedule and highlights the effectiveness of the training. The rules of using this Module is also stated in this Module which is helpful for the facilitator. The Module is based on a two-day training course.

## **Tatabadhayak Training Proshikkhan Sahaika (Tara Nolkup-2)** **(Caretakers' Training Manual - Tara Pump-2)**

*Prepared by:*

Village Education Resource  
Centre (VERC)

*Published by:*

Village Education Resource  
Centre (VERC)

This publication is a Training Manual designed for Tara Pump Caretakers. The Manual explains causes of health related problems in the society and mentions the ways of protection. The Manual also highlights importance of safe water, causes of water pollution and importance and using of sanitary latrines, personal hygiene practice, Tara Pump and its advantages, tubewells and its maintenance and duties and responsibilities of Caretakers. The Manual is based on the contents of a 2-day training course.

## **The Tara Hand Pump** *-- The Birth of a Star*

*Prepared by:*

William K. Journey

*Published by:*

UNDP-World Bank Water and  
Sanitation Programme, November 1989

This document describes about the Tara Hand Pump that Tara Pump is a low-lift, direct action hand pump development in Bangladesh using concepts that are proving to be suitable for community water supply applications in a number of other developing countries. The publication shows that Tara Pump is simple, low-cost and easy maintaining water supply technology. This publication focuses on the design of the Tara Hand Pump, field experience,



components and production of this technology. This publication includes a case study from Bolivia in terms of Tara Hand Pump.

## **The Treadle Pump**

*-- Manual Irrigation for Small Farmers in Bangladesh*

***Prepared by:***

Alastair Orr  
A.S.M. Nazrul Islam  
Gunnar Barnes

***Published by:***

Rangpur Dinajpur Rural Service (RDRS)  
November 1991

This Book is based on a survey of the socio-economic impact of the treadle pump made by the Bangladesh Rice Research Institute (BRRI) in the winter season of 1987/88. The Book is organized into several chapters. Chapter 1 introduces the treadle pump and explains its successes in terms of three design criteria: a high and sustainable level of output, simplicity of manufacture, and low-cost. Another factor in the success of the pump has been effective marketing. Chapter 2 narrates how International Development Enterprises (IDE) has created a national market for the treadle pump and examines the depth of this market. The next three chapters analyze different aspects of the pump's impact. Chapter 3 examines adoption and maintenance, and shows that the pump has been adopted primarily by small farmers and is easy to maintain. Chapter 4 explored the pump's impact on cropping intensity and employment. Chapter 5 measures the impact on farmer's income. Two case studies are presented in Chapter 6. Finally the results are summarized in the conclusion.

## **Training Guide Book on Water-Well Drill TH-10**

***Prepared by:***

Sk. Naimul Islam, Unicef-Bangladesh

***Published by:***

DPHE & Unicef-Bangladesh  
March 1998

This is a Training Guide Book. This Guide Book provides relevant information on Water-well Drill TH-10 technology that TH-10 Ingersoll-Rand Drilling Rig is a light weight equipment designed for water-well drilling and other exploration applications. It is a good machine, which can be operated and maintained locally. Many countries in this world are using this Rig for water-well drilling and benefiting a lot by providing safe drinking water to the rural communities. Unicef-supported TH-10 at Chittagong is a truck mounted Rig and can move

easily. This Guide Book elaborates that the Rig is also suitable for mounting on local Trucks, Trailers or other vehicles. The Rig is in very good condition and hoping to get its better performance in the near future within 3 CHT Districts. This is an exceptional drilling system and Superior Value Package without mud pump. Mud pump is necessary due to fluid drilling that is required within CHT areas which is in a process to procure as soon as possible. It is a hydraulic top head drive rig for rural water supply and monitoring wells.

**Trinomul Kendrabhittik Dakkhata Proshikkhan Sahaika**  
**(Nolkup Meramot O Rakkhanabekkan)**  
**(Community Centre-based Skill Development Training**  
**Manual - Tubewell Repairing & Maintenance)**

*Prepared by:*  
Training Division, Proshika

*Published by:*  
Proshika-MUK

This is a training Manual. This Manual describes the reasons that why the tubewells become inoperative and explains the technical know-how of repairing those tubewells. The training course following this Manual helps particularly women to enhance their self-esteem and technical skills to be developed as caretakers. This Manual also shows how to add extra GI pipe with the tubewells during the emergencies and how to ensure safe water through washing process of tubewells. This Manual narrates the detailed process and procedure of a 4-day training course, and the participant level is group member(s).

**Water, Environment and Sanitation**  
**Technical Guideline**  
**(Water Handbook)**

*Prepared by:*  
Programme Division, WES Section, Unicef

*Published by:*  
Unicef-Bangladesh  
June 1997

The Water Handbook is part of a series of modules which are written with the objective of assisting Unicef programme and project officers in the operationalization of the new WES strategies as presented in Unicef Strategies in Water and Environmental Sanitation. This Guideline contains a set of summary points to assist the reader in reviewing the section or of getting an idea of the contents of the section. The Guideline shows that a successful and cost-effective maintenance programme is often much more difficult to achieve than the installation of the water system itself. Some case studies are also presented in this Handbook to illustrate the striking feature on the technical issues related to water, environment and sanitation. The

Guideline highlights that due to over-pumping and increased pollution, the protection and management of freshwater resources is rapidly becoming the overall sectoral priority.

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# ***WATSAN***

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# **An Overview of the Water Supply and Sanitation Project Activities and Development Partners in Bangladesh**

*Prepared by:*  
Golam Morshed

*Published by:*  
WHO-Bangladesh & BAN-PHE 001, June 2001

This Report gives an overview of the organizations including government on safe drinking water supply and sanitation issue. The information compiled in this Report has been shared with all interested stakeholders. The issues like government's programme for water supply and sanitation; current support from UN and donor-agencies for water supply and sanitation; involvement of national and international NGOs in water supply and sanitation; and involvement of research organization and consultants in water supply and sanitation activities are reviewed, which are documented in this Report. This Report is prepared with the objective to promote and to create linkage between all the organizations involved in the water supply and sanitation sector.

## **Angshograhonmulak WatSan Monitoring Bishaiak Proshikkhan Sahaika (Training Module on Participatory WatSan Monitoring System)**

*Prepared by:*  
Training Cell, NGO Forum for DWSS

*Published by:*  
NGO Forum for DWSS

This is a Training Module on Participatory WatSan Monitoring System, designed for partner NGOs' monitoring related staffs to enrich partners' knowledge and skill of proper monitoring process so that they can provide monitoring tools and can apply the appropriate methodologies. The Module for the 5-day training course has the following contents: i) Goals, objectives and components of WatSan programme; ii) Monitoring, its usefulness, steps, tools, indicators and participatory monitoring; iii) Monitoring process and its limitation in case of NGO Forum; iv) Process and importance of community based monitoring; v) Input sheets of community based monitoring process; vi) Pocket voting; vii) Process of data collection at field level, etc.

## **Approach Setting for the Community Management Component -- A Facilitator's Manual**

*Prepared by:*  
Peter Eppler  
Shyamal Kumar Saha

*Published by:*  
DASCOH, March 2000

*Edited by:*  
Jane Crossley

Adele Beerling

This Manual is the first in a series of training and learning materials for the WatSan Partnership Project (WPP) – a SDC-funded project in Rajshahi. This Manual is a practical tool for staff members and executives of WPP partner NGOs to initiate a process-oriented community-managed water and sanitation programme at village level. This is based on a systematic material development process and also makes use of experiences with community management in different projects. DASCOH training and learning materials for the WatSan Partnership Project address various aspects of the community management process. This Manual gives an overview of the total community management process and approach. The Manual contains two sections. The first section contains the use of the Manual, information on participants, contents and objectives of the workshop and the methodology of the workshop. The second section contains modules, which are organized into sessions.

## **Bangladesh Situation Analysis Water Supply and Sanitation**

*Written by:*

Haroon-Ur-Rashid  
Md. Mujibur Rahman  
Susan Turnquist  
Peter Lochery  
Rekha Dayal

*Published by:*

MLGRD&C, UNDP, UNDP-WB &  
Unicef-Bangladesh, September 1994

This Report elaborates on the strategies and current activities of the water and sanitation sector, assessing achievements, identifying issues, and noting constraints. The Report is limited specifically to agencies and activities operating directly in the WSS sector. The Report is organized into six chapters which include the purpose of the Report of the situation analysis of the water and sanitation, the technologies which are currently in use and socio-economic aspects of water and sanitation, the institutional actors in water and sanitation, the rural situation, covering resource base, current strategies and service provisions, the urban sector, including pourashavas, the high population density and the drainage and solid-waste disposal. The suggestions for consideration in the development of a comprehensive strategy finally concludes the Report.

### **Bibhinno Projuktir WatSan Samogri Bazarjatkaroner Jannya Udpadonkari, Bikreta O Sarborahokari Orientation Sahaika (Training Module on Orientation on Marketing of New Technologies for Hardware Shopkeepers, Suppliers and Producers)**

*Prepared by:*

*Published by:*

This is a Training Module, designed for private latrine and tubewell producers, shopkeepers and suppliers to make them aware and select their roles so that they can understand about their roles in WatSan programme and act accordingly. The Module for the 2-day training course comprises of the following contents: i) Goal, objective and component of WatSan programme; ii) Present national and local WatSan situation; iii) Working approach of NGO Forum; iv) Role of producers, shopkeepers and suppliers in WatSan development process; v) Process of marketing for producers, shopkeepers and suppliers; and vi) Identification of helping point of WatSan development.

## **Brochure on Safe Water Supply and Environmental Sanitation Programme**

*Prepared by:*

Mosharref Hossain Bhuiyan

*Published by:*

Proshika-MUK+

This Brochure highlights the organizational goal and objectives in the water, sanitation and hygiene programme of Proshika-MUK. The Brochure describes the objectives of WatSan programmes: to motivate target groups towards better sanitation, water supply and hygiene education and bring about their behavioural change; to motivate community people on cost sharing for hardware procurement and cost bearing for maintenance of the service; to provide tubewells for safe water supply and minor irrigation and sanitary latrine for clean environment to the selected families; and to chalk out uniform programmes in collaboration with related government and non-government organizations to make the programme successful achieve the desired goal. This Brochure is helpful for any of the WatSan sectoral organization to run the WatSan programme effectively.

## **Community Byabosthaponai WatSan Karmosuchi Bastobayon Bishaiak Proshikkhan Sahaika**

**(Training Module on Community Managed WatSan Programme)**

*Prepared by:*

Training Cell, NGO Forum for DWSS

*Published by:*

NGO Forum for DWSS

This is a Training Module on Community Managed WatSan Programme, designed for field workers of partner NGOs and supervisors to make them efficient to ensure participation and management as well as community management through formation of Village Development Committees (VDC) to sustain WatSan Programme. The Module for the 5-day training course comprises of the following contents: i) Goal, objective and components of WatSan programme; ii) Present WatSan situation; iii) Community management; iv) Sustainability of WatSan programme; v) PRA method and tools; vi) Steps of village development committee formation; vii) Process of need assessment of village people in WatSan programme implementation; viii) Planning and monitoring.

## **DASCOH DORPON**

### **Assessment of the capacity of Village Development Committees to manage water and sanitation activities**

*Prepared by:*  
Md. Saiful Islam

*Published by:*  
DASCOH, September 2000

The findings of the Study on assessment of the capacity of Village Development Committees have been documented in this publication. This Book is organized into three parts. The first part describes VDC assessment process. The part two includes VDC assessment results. And the part three draws a conclusion on the Study. The VDC assessment revealed that in most cases VDCs were able to conduct their own meeting. The general villagers showed their interest to be a member of village based organization. They can make their development plan regarding water and sanitation. The findings also revealed that the VDCs need to improve their capacity for dissemination of information among the general members, problem identification, analysis and decision-making in a participatory way.

## **Dharmio Netader WatSan Orientation Sahaika**

### **(Training Module on Orientation for the Religious Leaders)**

*Prepared by:*  
Training Cell, NGO Forum for DWSS

*Published by:*  
NGO Forum for DWSS

This is a Training Module to orient the religious leaders on the present status of WatSan and to provide them clear concept about the importance of WatSan practice in daily lives. The Module for the 1-day training course has the following contents: i) Goal and objective of WatSan programme; ii) Present WatSan status of Bangladesh; iii) WatSan related diseases and its prevention; iv) Importance of WatSan from the religious point of view; and v) Role of religious leaders on promotional activities.



## **Drawing & Cost Analysis for Different Kind of Safe Water Sources, Water Purification Plant & Latrine**

*Prepared by:*

Field Operation Cell, NGO Forum for DWSS

*Published by:*

NGO Forum for DWSS

This publication provides diagrams for construction of different types of water supply technologies like No.6 Hand Tubewell, Tara Hand Pump, Pond Sand Filter, Rain-water Harvesting System, Iron Removal Plant, etc. The publication shows diagrams of different types of latrines like water-seal, san-plat, off-set latrines, etc. The publication provides cost analysis of spare parts and materials of both the water and sanitation technologies. The publication describes Spring Water Capping System and costs for developing this system. The publication highlights the advantages and disadvantages of these technologies.

## **Formation of Village Development Committees -- A Facilitator's Manual**

*Prepared by:*

Shyamal Kumar Saha & Peter Eppler

*Published by:*

DASCOH, March 2000

*Edited by:*

Jane Crossley  
Adele Beerling

This Manual is the second in a series of training and learning materials for the WatSan Partnership Project (WPP). This Manual is a practical tool for staff members and executives of WPP Partner NGOs who are working at village level. The Manual outlines how to apply various Participatory Rural Appraisal (PSA) methods to mobilize village communities to form Village Development Committee (VDC) in a process oriented approach in a community-managed programme. This Manual is based on a systematic material development process and also makes use of experiences with community management in other projects. This Manual deals with the various steps that need to be taken to establish a development committee. The Manual has two parts. The first part contains the use of the Manual, information on participants, contents and objectives of the workshop and the methodology of the workshop. The second part contains modules, which are organized into sessions.

## **Grameen Pani Sarboraho O Sanitation Poristhiti (Rural Water Supply and Sanitation Situation)**

*Prepared by:*  
Unicef-Bangladesh

*Published by:*  
DPHE & Unicef-Bangladesh, October 1994

The situation of rural water supply and sanitation has been documented in this publication. This Book describes safe water supply and importance and using status of safe water for all purposes. The low-cost water supply technologies have been introduced in this publication for creating interest of the low earning people. Alongside water supply technologies and safe water using status, use of sanitary latrine, advantages of using sanitary latrine, personal hygiene practice etc. have been described in this Book.

## **Guidebook to Tackle Water Supply and Sanitation During Emergencies in Bangladesh**

*Prepared by:*  
Abu Shahjalal Azad

*Published by:*  
Disaster Forum-Bangladesh, May 2000

This Guidebook separately deals with different calamities, namely, flood, cyclone and tornado, both in urban and rural context, with particular focus on special gender needs. The Guidebook highlights that one of the many serious impacts of the disasters is disruption in the provision of safe water supply and sanitation giving rise to great risk to public health. Appropriate measures and methods are suggested in this Guidebook to cope with such disastrous situation during the calamities. It is instructed in this Guidebook that how to use the technologies for water supply and sanitation during the calamities.

## **Impact Study on NGO Forum's Advocacy & Information Services**

*Prepared by:*  
Environment & Social Development  
Organization (ESDO)

*Published by:*  
NGO Forum for DWSS  
December 1999

NGO Forum has been facilitating a strong advocacy system, alongside its existing Information Services, with the GOB, UN-bodies, partners and other NGOs and the sectoral & trans-sectoral stakeholders to ensure a favourable atmosphere for smooth implementation of the WatSan programme. The objective of the Impact Study on Advocacy & Information Services was, to determine the advocacy and information process of NGO Forum and assess the impact of the service at the target level. The findings of the Study is satisfactory in terms of overall collaboration with the sectoral and trans-sectoral stakeholders and mass-media personnel, participation of local opinion leaders in the respective programmes, WatSan messages

dissemination to the target audience. Some lacking also came out from the Study as the poor collaboration with the WatSan private producers, low concern about the radio and TV spots of the target groups, limitations in supplying some of the printed materials etc. The Report highlights that NGO Forum's Advocacy & Information Services easily make the audience more understandable about WatSan matters and in parallel can build a massive awareness of using safe drinking water and hygienic sanitation.

## **Nirapad Pani O Paribeshgato Sanitation – Shalpo Mulyer Projukti (Low-Cost Technology in Safe Water and Environmental Sanitation)**

*Prepared by:*

Nurul Kabir  
Abul Kalam  
Wakil Mujahid

*Published by:*

NGO Forum for DWSS, April 1995

This is an information Booklet on simple and low-cost tubewell and latrine technologies. Simple low-cost and affordable tubewell and latrine technologies need to be invented and introduced to the poor people of Bangladesh. The Booklet provides information on different low-cost technologies currently available in Bangladesh. Information on 14 types of water supply and water purifying technologies, 9 different types of low-cost hygienic latrines have been provided in the Booklet. These technologies are suitable for different areas, environment and seasons. Detailed description with key drawing of each and every technology including advantages and disadvantages of each technology, required materials, construction techniques and approximate cost has been given in the Manual. Through providing correct information on different technologies, this Booklet plays supportive role in planning and implementing the WatSan programme at the grassroots level.

**Nirapad Pani O Sanitation  
Bidyalay Karmosuchi Nirdeshika**

**Safe Water and Sanitation  
School Programme Manual**

*Prepared by:*  
Md. Azahar Ali Pramanik

*Published by:*  
NGO Forum for DWSS, June 2001

*Edited by:*  
Rehana Akhter

This Manual is an operational guideline for conducting the School WatSan Programme. School programme is one of the key components for successful implementation of WatSan programme. The school has an important role to play in changing behaviour and promoting good practices of the students. The objective of the water and sanitation programme can be achieved through creating awareness and motivating the school students so that they transmit the knowledge to their family and neighbours. The school teachers also can be a part of the process. The Manual has been developed as a support material for conducting School WatSan Programme effectively. The objectives of School WatSan Programme, steps and activities for implementing the programme, information on how to promote the hygiene practice among the students, etc. are the topics included in the Manual. This support material is targeted to the NGO staff and school teachers.

**Nirapad Pani O Sanitation Bishaiak**  
**Udbuddhokaron Karjokram Bastobayon Sahaika**  
**(Promotional Activity Implementation Manual on Safe WatSan)**

*Prepared by:*  
Md. Azahar Ali Pramanik

*Published by:*  
NGO Forum for DWSS, October 1999

*Edited by:*  
Rehana Akhter

This Manual is designed for field level Staff, Programme Coordinators and Trainers, above all for those staff who are involved in implementation of promotional activities. This Manual describes types of promotional activities, objectives and effectiveness of the promotional activities of NGO Forum implemented through its partner organizations on safe WatSan and hygiene issues. This Manual is developed for the target people with the objective of creating awareness of community people on public health and sanitation issues.

**Nirapad Pani O Sanitation Bishaiak**  
**Udbuddhakaron Karjokram Bastobayon Nirdeshika**  
**(Manual on Promotional Activities)**

*Prepared by:*  
Md. Azahar Ali Pramanik

*Published by:*  
NGO Forum for DWSS, June 2001

*Edited by:*  
Rehana Akhter

This is an operational Manual on promotional activities. Success of development programme demands active and spontaneous participation of community people. NGO Forum, through its partner NGOs, conducts promotional activities to ensure people's participation in WatSan. From the need to have a uniform guideline for conducting the promotional activities, NGO Forum has developed the Manual on promotional activities. Description of different promotional activities on WatSan, justification, participant level and number in each activity, duration and venue for the programme, materials required for the programme and estimated budget are mentioned in the Manual. Topics for discussion are also included in the Manual. This is a support material for the trainers, programme coordinators and field staff which will guide them in training as well as in conducting WatSan promotional activities at the community level.

**Nirapad Pani O Shasthyasammato Paikhana**  
**(Safe Water & Sanitary Latrine)**

*Written by:*  
Chand Sultana

*Published by:*  
Dhaka Ahsania Mission, July 2000

This Book is a continuing education material for the neo-literates and persons with limited reading skills. This Book describes about safe water, use of tubewell water for all purposes, necessary precautions in using tubewell water, necessary information about arsenic contamination, and alerts people against using water of some tubewells that are contaminated by arsenic. The reasons for water pollution and ways to keep water sources pollution-free and making drinking water safe have been described in details in the Book. The Book also describes about the process of making pit and water-seal latrines and advantages of those latrines along with the disadvantages of open latrines and open defecation. The hygienic use and maintenance of different types of latrines have been described in the Book too.

**Nirapad Pani Sarboraher Bibhinno Projuktir Pump/Plant O  
Shasthyasammato Paikhana Sthapon Nirdeshika  
(Manual on Technologies of Safe Water Supply and Sanitary Latrine Installation)**

*Prepared by:*

Engineer Md. Zillur Rahman  
Md. Azahar Ali Pramanik

*Published by:*

NGO Forum for DWSS  
December 2000

This is a Manual on installation of technologies of safe water supply and sanitary latrines. This Manual describes about the site selection for installation of technologies, advantages and disadvantages of technologies and shows the process of installation of different water and sanitation technologies. Particularly, the Manual focuses on No.6 Tubewells, Deep-set Pump, Semi Deep-set Pump, Iron Removal Plant, Rain-water Harvesting System, Pond Sand Filter, Ring-well and different types of sanitary latrines, namely, water-seal, san-plat, off-set latrines, etc.

**Participation in BRAC's Rural Development Programme and the Impact  
of Group Dynamics on Individual Outcomes**

*Prepared by:*

Simeen Mahmud  
Samiha Huda

*Published by:*

BRAC, 1998

This Study Report focuses on the working paper series on the progress and early results of a joint research project by BRAC and ICDDR,B. The joint research project was designed to study the impact of BRAC's socio-economic interventions on the well-being of the rural poor, especially of women and children. The Report highlights women's participation in BRAC's rural development programme to identify some unobserved selection factors that are believed to influence women's decision to participate or not and, the effect of group dynamics on individual outcomes of women programme participants. The results show that women's decision to participate was determined significantly by reported health status including water supply & sanitation, perceived contribution to household income, household land ownership, relation with husband and unwanted pregnancy. The individual factors like age, literacy, marital status, etc. had no effect on the decision to participate. Group dynamics was captured by three indexes e.g., VO (Village Organization) homogeneity, VO activity and VO social awareness. From the findings, it is desirable to pay greater attention to group mobilization and group formation processes in programme implementation.

**Participatory Assessment Analysis and Action  
*Implementation Strategies for Community Based Development***

*Prepared by:*  
Rita Das Roy  
Shaila Khan  
Amina Mahbub  
A.B.M. Tariqul Alam

*Published by:*  
Unicef-Bangladesh, August 1997

Participatory Assessment Analysis and Action (PAAA) is one of the key strategies identified for community based participatory approach. PAAA facilitates the decentralized planning process, involves the community in the planning, establishes linkages between the communities in the district level and has scope to involve the local GO & NGO to implement the need based plan of action. Unicef-Bangladesh in collaboration with BRAC has developed this Training Manual with the objective to impart training of Planning Assistants (PA) and Village Mobilizers (VM) according to ADA concept paper on PAAA. This training is facilitated for PAs to prepare a need based plan with the involvement of the community. This Manual has been developed on the basis of a study conducted by ICDDR,B and BRAC joint Research Project on “Participatory methods to assess change in health and women’s lives: an exploratory study”.

### **Poribesh O Sanitation Unnayan-e Ganojogajog O Samaj Andolon** **(Role of Mass Communication and Social Mobilization for** **Better Environment and Sanitation)**

*Prepared by:*  
Dr. Kazi Ali Azam

*Published by:*  
Salimullah Khan Selim, September 1997

This Book focuses on water supply, sanitation and hygiene practices, including important statistical data and familiar picture to make the communication easy for the executives and field workers in the government and NGOs of union, thana, district level and for the general people. The Book has incorporated pictures which teachers can use to teach the students. The Book can be used as a ready reference by NGOs, government executives and policy-makers to analyze the WatSan situation. NGO Field workers, mechanics, SAE can use this Book as a flip-chart to motivate general people of the villages especially women in the courtyard meeting. The Book addresses the rural people’s socio-economic and religious aspects, arsenic issue, flood management for water, gender issue and low-cost technology of water supply and sanitation.

### **Providing the Urban Poor with Water and Sanitation: An Introduction**

*Prepared by:*  
Lammia Sharmin  
Helga Rainer

*Published by:*  
BRAC

The Report focuses that the unhealthy conditions due to lack of sanitation cannot be ignored because sanitation related diseases and polluted water sources often have devastating social, economic and environmental effects on all urban residents. They, especially the urban poor are particularly susceptible to epidemics and vector-borne diseases. The need for decent water and sanitation for the urban poor is therefore imperative. The aim of this Report is to look at water and sanitation projects present in the slums of Dhaka. Four NGOs have been looked at (DSK, Proshika, Plan International and Concern) which have undertaken water and sanitation projects throughout the Dhaka slums. This Report serves as an introduction into the area of urban water and sanitation projects in Dhaka city. The highlighted issues include community management and some of the technical challenges regarding the implementation of the projects.

## **Report on Qualitative Study on WatSan IEC Activities of NGO Forum**

*Prepared by:*  
Md. Fazlul Hoque

*Published by:*  
NGO Forum for DWSS, April 2001

The objectives of the Study are to assess the qualitative outputs that came out through the facilitation of IEC activities, and to recommend to NGO Forum on the monitoring process and procedure both in terms of quality and quantity of the IEC activities. The key findings of the Study is highlighted in the Report which show the usage of IEC materials in Village Development Committee; the effectiveness of courtyard meetings in WatSan promotion in terms of attendance, implementation of action plan, usage of IEC materials etc; the positive impact of school WatSan programme; knowledge on and practices of IEC materials by different fora and the motivation of different levels of people; usage of different manuals on WatSan technologies by the relevant groups of people and so on. Based on the findings different recommendations have been made in the Report covering issues like issue based monitoring, follow-up of monitoring system, sharing of monitoring findings for corrective measures.

## **Report on the Mid-Term Evaluation Sanitation and Family Education Resource (SAFER) Project**

*Prepared by:*  
Raquiba Jahan, CARE-Bangladesh  
Judi Aubel, Freelance Consultant  
Abu Hena, PROMPT-Bangladesh

*Published by:*  
CARE-Bangladesh  
July-August 1998



This Mid-Term Evaluation Report is mainly intended to help SAFER staff determine how to improve project implementation. It should also be useful for others working in other projects within CARE and in other organizations. For those working in NGO capacity building, this Report provides some important lessons on sanitation and hygiene issues. This Report should also be useful to policy-makers, programme planners and managers, and others responsible for setting hygiene/sanitation programme priorities and for designing appropriate technical assistance strategies for building NGO capacity. This Report includes a description of the evaluation methodology, the findings and lessons learned, and a summary of the findings and recommendations.

## **Review the Cost and Design of the Water and Sanitation Facilities of School Sanitation Programme**

*Prepared by:*

Bangladesh Engineering &  
Technological Services (BETS)

*Published by:*

Unicef-Bangladesh  
January 1999

The Report includes the aspects like review of the existing facilities, design of children-friendly WatSan facilities, cost estimation and operation, and maintenance manual etc. The Report highlights on the findings of the Study i.e. the design of the sanitation facilities was found to be child friendly and acceptable in most of the areas. The Report describes the existing WatSan facilities in different hydro-geological areas, which were reviewed through the Study. The Study assessed whether these facilities were suitable for primary school children specially for girl students. The Report focuses on the increasing use of the facilities by the students specially the latrines and hand-washing after defecation, and recommends that motivational activities and monitoring have to be practiced regularly in each school. The Report includes the contents that are study area, study methodology, detailed analysis of the study-findings, recommendations, and design cost and O&M of WatSan facilities.

## **Sahojogi Sangsthar Nirbahider Gender Sachetonota Bishaiak Karmoshala Sahaika**

**(Training Module on Gender Sensitization Workshop for the PNGO Executives)**

*Prepared by:*

Training Cell, NGO Forum for DWSS

*Published by:*

NGO Forum for DWSS

This is a Training Module to enhance the PNGO executives' knowledge level of gender issues, particularly on the role of male and female as well as to ensure the importance of equal participation and activities. The Module for the 3-day training course has the following

contents: i) WatSan, goal, objective and components of WatSan; ii) WatSan situation; iii) Role of NGO Forum on safe water, hygienic latrine, cleanliness and hygiene practice; iv) Concept of gender and its importance; v) The difference between male and female empowerment and women rights in view of Bangladesh; vi) Role of development worker on assurance of equal participation for development programme; and vii) Role of executives on gender awareness building for WatSan programme.

## **Survey on the Impacts of the Changed Implementation Strategy on the Performance of the Rural Water Supply and Sanitation Projects during Fiscal Year 1989/90**

*Prepared by:*

AQUA Consultant & Associates Limited  
Infraconsult AG

*Published by:*

Unicef-Bangladesh  
September 1991

This Survey Report highlights the study findings. The Report narrates that the beneficiaries had to pay for repairs and, therefore, in many cases for spare parts no positive impacts of providing spare parts free of cost could be measured. There is little evidence that the poorer families were reached better in 1989-90. Very shallow shrouded TWs (VSST) and deep tubewells (DTWs) were installed primarily with the wealthier families. The Survey was carried out for assessing the quality of the RWSSP Programme with special emphasis on site selection procedures, condition of installations, performance of the maintenance system, training and monitoring of progress of the programme, and the Report highlights the findings on all these issues.

## **Towards Better Health**

*Prepared by:*

Unicef-Bangladesh

*Published by:*

Unicef-Bangladesh, September 1995

In the last 20 years the Government of Bangladesh, with the support of donors, has created a countrywide demand for tubewell for drinking water supply, and recently, an increasing demand for sanitation. Today 80 million people in rural areas have access to tubewell within 150 meters of their home. And 96% of the rural population drink tubewell water. 26% of the population now use sanitary latrines, compared to just 10% in 1989. During the United Nations "International Drinking Water Supply and Sanitation Decade", which ended in 1990, Bangladesh made remarkable progress. This was despite lack of money - which many countries claimed as the barrier to progress. This Booklet sets out how the water and sanitation programme in Bangladesh has developed and achieved its successes to date, and outlines the challenges of the future. The rural water supply and sanitation programme in Bangladesh aims to provide universal access to both clean water and sanitation by the end of this century.

## **Training Manual for Trainers**

*Prepared by:*

Communica

*Published by:*

DPHE & Unicef-Bangladesh, September 1998

This Manual includes training content, instruction, process, presentation, method/technique, etc. The methods like discussion, demonstration and practical exercise are mentioned in detailed in this Manual. This Manual is designed based on facilitating a 2-day training course. Proper use of this Manual will be helpful to achieve the goal of the programme. This Manual highlights that School Sanitation and Hygiene Programme is an initiative to motivate the students for building their proper habit and to develop them as a catalyst to change the community practices. To strengthen and make this initiative effective it calls for infrastructure and intensive education process as well.

### **Trinomul Kendrobhittik Proshikkhan Sahaika**

**(Nirapad Pani O Payopranali Byabosthapan)**

**(Community Centre-based Training Manual - Safe Water & Sanitation Management)**

*Prepared by:*

Training Division, Proshika

*Published by:*

Proshika-MUK

This is a training Manual. The Manual highlights the importance of safe water and hygienic sanitation maintenance; it introduces what is safe water and shows the ways of using safe water successfully. This Manual also shows the ways of identifying reasons and spreading of diseases, and gives direction of preventing the diseases. Community, family and personal hygiene practices also are highlighted in this Manual. The Manual is based on a 3-day course. The level of participants is group member(s).

### **Upakaron Byaboharer Moulik Proshikkhan**

**(Basic Training on Material Use)**

*Prepared by:*

Village Education Resource  
Centre (VERC)

*Published by:*

Village Education Resource  
Centre (VERC)

This is the Training Manual, designed for volunteers. This Manual focuses introduction to PRA method, importance of PRA, uses of PRA tools & techniques, awareness raising process and steps, and orientation on water supply and sanitation related materials. The Manual describes group initiatives in development and group formation. The Manual gives lesson on effective

technical sides of various types of tubewells and mechanical sides of various types of sanitary latrines. The duration of the course is 4 days.

## **VDC Sadasyader Netritta O Byabosthaponā Bishaiak Proshikkhan Sahaika**

**(Training Module on Leadership and Management for VDC Members)**

***Prepared by:***

Training Cell, NGO Forum for DWSS

***Published by:***

NGO Forum for DWSS

This is a Training Module on Leadership and Management for VDC Members, designed for leaders of VDC to make them competent in management and leadership to implement and sustain WatSan programme. The Module for the 2-day training course comprises of the following contents: i) Management and its importance; ii) VDC management; iii) Leadership, types and importance of leadership; iv) Process of need assessment and programme identification; v) Process of work plan preparation; and vi) Monitoring and evaluation.

## **Village Profile Preparation and Village Action Planning** *-- A Facilitator's Manual*

***Prepared by:***

Peter Eppler  
Shyamal Kumar Saha

***Published by:***

DASCOH, March 2000

***Edited by:***

Jane Crossley  
Adele Beerling

This Manual is the third in the series of training and learning materials for the WatSan Partnership Project (WPP). This Manual is a practical tool for staff members and executives of WPP partner NGOs who are working with Village Development Committees (VDC). This Manual outlines how to facilitate a VDC in preparation of a water and sanitation profile of a village and to facilitate a Village Action Planning workshop for development of a yearly action plan. This Manual is based on a systematic material development process and also makes use of experiences with community management in other projects. The Manual deals with the participatory situation analysis and participatory need assessment and action planning. The Manual has two parts. The first part contains the use of the Manual, information on participants, contents and objectives of the workshop and the methodology of the workshop. The second part contains modules, which are organized into sessions.

## **Water Supply & Sanitation Rural and Low Income Urban Communities**

*Prepared by:*

Dr. M. Feroze Ahmed, PhD  
Dr. Md. Mujibur Rahman, PhD

*Published by:*

ITN-Bangladesh, June 2000

This is a Textbook developed for students studying water supply and sanitation and their teachers at technical institutions in Bangladesh. It is also meant for professionals already working in the sector, who can use the Textbook for reference. To facilitate this from the beginning of developing the Book staff members of the ITN centre in Dhaka, teachers from technical institutions, professionals working in water and sanitation sector and officials from bilateral organizations gave their points of view on the contents of the Book. The Textbook deals with water supply and sanitation appropriate for rural and low-income urban communities in Bangladesh. It consists of three parts. The first part deals with the key elements needed for sustainable water supply and sanitation and the related 'software' are furnished here. The second and third parts deal with technical aspects of water supply and environmental sanitation.

## **Water Supply and Sanitation Problems in the Slums of Mohammadpur, Dhaka**

*Prepared by:*

Robert Gallagher

*Published by:*

WaterAid-Bangladesh, ActionAid-Bangladesh &  
VERC, June 1997

This Report summarizes the findings of a study on water and sanitation problems in the slums of Mohammadpur, Dhaka. The Report shares that the water and sanitation problems tend to vary with the season. In the wet season, water supply is less of a problem for most areas. In the dry season, however, the latrines are less of a problem, while water availability is more of a problem - the tubewells are only shallow, and dry up, and the ponds used for bathing are no longer available. The Report focuses that the worst environmental problem in the slum is polluted flood water during the rainy season, caused by industrial waste from the tanneries at Hazaribagh about half-a-mile to the south. The Report shows the slum dwellers pay a very poor

service in return. The water points are unhygienic and the large number of households using each point, and to face regular interruptions to supply.

## **WatSan Campaigney Ganosangkriti Bishaiak Proshikkhan Sahaika (Training Module on Popular Folk Media for WatSan Campaign)**

*Prepared by:*

Training Cell, NGO Forum for DWSS

*Published by:*

NGO Forum for DWSS

This is a Training Module on Popular Folk Media for WatSan Campaign, designed for programme organizers, field workers, trainers, motivators, and cultural minded workers. The Module describes the objective of the training course i.e. to execute the way to develop people's awareness on WatSan through popular folk-culture such as Kabigan, Puthy, Jari and Gomvira. The Module has the following contents: i) Aim, objective and components of WatSan programme; ii) Importance of safe water, hygienic latrine, personal, domestic and environmental cleanliness, concept, importance and process of social mobilization; iii) Promotional activities; iv) Communication, way of communication and barriers of effective communication; v) Different folk-media of Bangladesh; vi) Folk-culture and way of culture among different communities; vii) Popular theatre and steps of popular theatre for WatSan campaign; viii) Script writing on popular theatre and scene chart; ix) Role of actor/actress; rehearsal and review; x) Concept and importance of stage decoration, and stage performance.

## **WatSan Karmosuchi Byabosthaponna Bishaiak Karmashala Sahaika (Training Module on WatSan Programme Management Workshop)**

*Prepared by:*

Training Cell, NGO Forum for DWSS

*Published by:*

NGO Forum for DWSS

This is a Training Module on WatSan Programme Management Workshop, designed for executive director, programme coordinator and office chief to enhance their management capacity and skills. The Module for the 2-day training course comprises of the following contents: i) Aim, objective and components of WatSan programme; ii) Importance of safe water, hygienic latrine, personal, domestic and environmental cleanliness; iii) Role and working strategy of NGO Forum; iv) Process and importance of WatSan management; v) Local and external resources (inter-agency collaboration); vi) Way of trained staff's involvement in WatSan programme; vii) Participatory WatSan programme planning; planning for proper implementation of WatSan programme.

## **WatSan Karmosuchi Sthaikaron Bishaiak Proshikkhan Sahaika (Training Module on Sustainable WatSan Programme)**

*Prepared by:*

Training Cell, NGO Forum for DWSS

*Published by:*

NGO Forum for DWSS

This is a Training Module for Training of Trainers on Sustainable WatSan Programme, designed for trainers who are interested in facilitation, and permanent staff of NGOs who have at least passed the HSC, to develop partner's capacity to conduct training with proper management as well as to assess training needs, curriculum and module preparation, training aid selection and use. The Module for the 12-day training course comprises of the following contents: i) Concept of safe water; ii) Different water technologies; iii) Different types of hygienic latrine; iv) Importance of personal, domestic and environmental cleanliness and gender role; v) Sustainability of WatSan programme; vi) Promotional activities on community management and social mobilization; vii) Technique of communication and motivation; viii) Associating and networking on WatSan programme extension; ix) Training, education and learning; x) Training need and objective; xi) Training curriculum and lesson plan; xii) Training module preparation; xiii) Training method and material; xiv) Process of training evaluation, etc.

## **WatSaner Jannya Gram Unnayan Committeer Proshikkhan Sahaika (Training Module on Orientation of Village Development Committee)**

*Prepared by:*

Training Cell, NGO Forum for DWSS

*Published by:*

NGO Forum for DWSS

This Training Module is designed for VDC members to give them WatSan related knowledge and to make them active in the WatSan related activities in relation to the responsibility of VDC and the target for WatSan programme implementation. The Module for this 2-day training course has the following contents: i) Goal, objective and components of WatSan programme; ii) Concept of hygienic latrine, safe water and cleanliness; iii) Goal, objective and importance of VDC formation; iv) VDC management; and v) Role and responsibilities of VDC on WatSan development.

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# ***WATSAN & HYGIENE***

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**Accelerated Development of WatSan Facilities in Chittagong Hill Tracts Districts**  
**Participatory Assessment Analysis Action (PAAA) Approach:**  
**Pathway to Improve the WatSan Facilities in Bandarban District**

*Prepared by:*

Rita Das Roy  
Md. Serajul Hoque

*Published by:*

Unicef-Bangladesh, June 1998

This is a Report based on the Participatory Assessment Analysis Action (PAAA) approach. This Report illustrates the process of data analysis and planning, identifying interventions in relation to improvements in Water and Environmental Sanitation situation using the PAAA approach. The Report upholds the issues of access to safe water, sanitation and hygienic practices and socio-economic effects on the lives of the target communities in Bandarban. The Report explains the Participatory Assessment Analysis and Action (PAAA) as one of the key strategies identified for community based planning approach. PAAA facilitates a bottom-up planning process. It is designed to create an environment for two-way communication between extension workers and service providers wishing to help communities improve their water supply, sanitation and hygiene practices and the community member themselves, both men and women. The Report has been organized into four chapters that include introduction; objectives and outputs; water and sanitation assessment; and limitation, observation and recommendations.

**Accelerated Development of WatSan Facilities in Chittagong Hill Tracts Districts**  
**Participatory Assessment Analysis Action (PAAA) Approach:**  
**Pathway to Improve the WatSan Facilities in Khagrachhari District**

*Prepared by:*

Rita Das Roy  
Md. Serajul Hoque

*Published by:*

Unicef-Bangladesh, June 1998

This is a Report based on the Participatory Assessment Analysis Action (PAAA) approach. This Report illustrates the process of data analysis and planning, identifying interventions in relation to improvements in Water and Environmental Sanitation situation using the PAAA approach. The Report upholds the issues of access to safe water, sanitation and hygienic practices and socio-economic effects on the lives of the target communities in Khagrachhari. PAAA facilitates a bottom-up planning process. It is designed to create an environment for two-way communication between extension worker and service providers wishing to help communities improve their water supply, sanitation and hygiene practices and the community member themselves, both men and women. The Report has been organized into four chapters that include introduction; objectives and outputs; water and sanitation assessment; and limitation, observation, recommendations and conclusions.

## **Across The Villages**

*A collection of Experiences on Water and Sanitation*

*Edited by:*

Qazi Mahbubul Hasan

*Published by:*

NGO Forum for DWSS, December 1997

This publication is a collection of experiences of the Forum's partners on WatSan activities in rural Bangladesh. The views of the community people have also been documented with great interest. The Book contains 23 different stories flashing over the experiences of the implementers and the benefited villagers with the integrated WatSan programmes. Capacity building of the partners and effective collaboration with the sectoral stakeholders is the key concerns. The software support services of NGO Forum are leading to mass awareness for the proper hygiene behaviour, and hardware is the physical materials and infrastructure support to translate the people's awareness into action. This key principle is highlighted in the Book.

## **Basic Health and Hygiene Education**

*Prepared by:*

Village Education Resource  
Centre (VERC)

*Published by:*

Village Education Resource  
Centre (VERC)

This is the Training Manual designed for volunteers. The Manual gives introduction to knowledge on development perceptions, safe water and its sources, water pollution and arsenic. The Manual also highlights on hygienic sanitation, domestic and personal hygiene practices, duties and responsibilities of volunteers on WatSan and hygiene promotion and elaborates the process of implementation. The Manual focuses on the Methods of the training course conduction and materials used in the training sessions.

## **Don't Just Say It, Do It !**

*Prepared by:*

Raquiba A. Jahan  
Florence Durandin

*Published by:*

CARE-Bangladesh, June 1995

This Booklet reviews the issues which require consideration when planning and supporting programmes in water and sanitation where hygiene behaviour change is the key objective. It asks the reader to review whether present hygiene education programmes are doing enough to promote behaviour change, or if they are merely increasing awareness of hygiene issues. This Booklet is aimed at those who are able to make or support policy-decisions regarding programme design for health and sanitation programmes. These include the policy-makers and planners from government organizations, international agencies, national and local NGOs and donors. It is intended that these policy-makers and programme planners will respond by ensuring that programmes for which they are responsible adopt approaches which promote behaviour change, and not simply awareness.

### **Drinking Water, Bathing and Sanitation: The Risk to Human Health in Rural Bangladesh**

*Prepared by:*

M.T. Chadwick  
A. Clement  
N. Hickman-Robertson  
S. S. Alam  
D. Mallick  
J. G. Soussan

*Published by:*

School of the Environment  
University of Leeds, U.K.

This research Report is based on the working papers on participatory research being undertaken in Bangladesh into the local water management strategies of the rural population. As part of the research programme a quantitative analysis was made of the levels of faecal contamination of the water resources with which the population come into regular contact. This Report shows that the drinking water, supplied universally through hand pumps, is of a high quality. However, contamination was found to occur post-extraction, where water was kept in storage jars. Many of the water bodies used for bathing were heavily contaminated and exceeded EU Directives for bathing water by as much as 30 fold. Such levels clearly represent a health risk. The Report describes the services each of these water sources provides, and outlines the social and cultural behavioural patterns behind their use. This Report urges health care providers to develop approaches that look the linking of drinking water supplies and sanitation

to health that has dominated the last decades of the 20<sup>th</sup> century and, aims to educate and adjust cultural behaviour in relation to the form of utilization of various water resources.

## **Effectiveness of Communication Materials**

*Prepared by:*  
Nishat A. Chowdhury  
Zafrin J. Chowdhury

*Published by:*  
NGO Forum for DWSS  
October 1997

This review was carried out in order to see whether the communication materials are effective, target group oriented and gender balanced and to suggest future directions. Review of the existing communication materials shows NGO Forum as an organization which recognizes the need for development and has a strong commitment to develop and use effective communication materials to disseminate safe water and sanitation messages. A continuous effort to improve the materials is noticeable. The Report highlights NGO Forum's place in a position of advantage to use communication strategies for optimum benefit. However, in order to overcome some weaknesses, there is a need for specialized input to increase the effectiveness of the communication materials. The images in the materials are realistic, one can relate to them. They are communicable in that the materials encourage positive changes and are motivational. The Report concludes that segmented groups have been addressed through different types of materials which are finely balanced between hardware and software and are community focused.

## **Effects of NGO Forum Supported Programme in Changing People's Knowledge, Attitude and Practices on Safe Water and Sanitation** *-- An Evaluation*

*Prepared by:*  
Fazlul Karim  
Anisha Datta  
AMR Chowdhury

*Published by:*  
NGO Forum for DWSS  
January 2000

It was a comparative study between programme and non-programme areas where the changes were measured by comparing the present status of the indicators of the programme area with those of the non-programme area. Although NGO Forum does not have the project activities in the non-programme area, but such area may have interventions of other agencies, which may influence the comparison to some degree. However, given the fact, any positive outcome found in the programme area was attributed to programme effects of NGO Forum. The major

variables/indicators examined in the study were place of defecation, and sources of water used for different purposes, sources of obtaining water and sanitation services, as well as knowledge and practice of the respondents on safe water, sanitation and personal hygiene, and perceived economic status of the households. The Report discloses that over 90% of households in both the study areas were found to be aware of the consequences of using unsafe water and latrines. Although the study revealed a substantial progress of the Forum's programme there is still room for improvement, the study recommends.

## **Evaluation of the Use and Maintenance of Water Supply and Sanitation System in Primary Schools**

*Prepared by:*

Consulting Services & Associates

*Published by:*

DPHE, DPE & Unicef-Bangladesh  
October 1994

This Report describes in brief the background aspects of the Study and how the Study was carried out; projected thana-wise findings in details; and general observations based on the Study. This Study is essentially a survey on "Evaluation of the Use and Maintenance of Water Supply and Sanitation System in Primary Schools" constructed during 1992-1993. The Report focuses on the assessment of the construction quality of water supply and sanitation system. The Report highlights on the level of usage of water and sanitation facilities by the boys, girls, teachers and any other users, the level of knowledge of the students related to water, sanitation and hygiene and degree of practice at school and at home. The Study found out the frequency and type of hygiene education imparted to the students by the teachers and others and to assess the impact of facilities on the girl attendance rate at schools.

### **Evaluation Report The Water Sanitation and Hygiene (WASH) Project**

*Prepared by:*

Shahnaz Ahmed

*Published by:*

CARE-Bangladesh, December 1992

This document highlights on the objective of this evaluation was to examine if there had been a positive impact on the population's acquisition of health knowledge, as well as the ability to rehabilitate and maintain tubewells and latrines by using a participatory approach and new technologies. The Report focuses that most of the tubewells were functioning, but ring-wells were difficult to repair once broken. Of the sanitary latrines surveyed all were in operation and except in Moheshkhali, were being well maintained. The Report reveals that hygiene education messages were disseminated by the Field Extensionists to female beneficiaries and by Field

Assistants to male beneficiaries in the areas where the WASH Project constructed new ring & tubewells and sanitary latrines.

## **Gram Unnayan Committee Sahaika (Manual on Village Development Committee)**

***Prepared by:***

Md. Azahar Ali Pramanik

***Published by:***

NGO Forum for DWSS, July 2000

***Edited by:***

Rehana Akhter

Abul Kalam

This is a Manual on facilitation of various activities by the Village Development Committee (VDC). It has been observed that there is no trans-sectoral committee at the village level for planning and follow-up of the development programmes. VDC is formed to ensure the promotion and sustainability of programs through institution building at the grassroots or village level. The VDC Manual has been developed from the need for having some guidelines on mobilization of VDC. The Manual describes objectives and necessity of VDC, its formation process/components, responsibilities and activities of VDC, the implementation process and duration of VDC in a very simple manner. The Manual has been mainly developed for the NGO mid level staff and VDC members. This Manual can also be utilized by the field level staff.

## **Inching Towards A New Horizon**

***Study Conducted by:***

Dwijen Mallick

Md. Ayub Ali

***Published by:***

NGO Forum for DWSS, December 1999

***Edited by:***

Joseph Halder

This publication is based on a study conducted covering all the geophysical aspects and programmatic variations, people's perception, the level of WatSan achievement, the constraints and suggestions to overcome those by NGO Forum in partnership with NGOs & CBOs and in collaboration with other sectoral & trans-sectoral stakeholders. The Book is an attempt from NGO Forum's part to highlight some of its glowing success among plenty while presenting the region specific geophysical condition and WatSan situation, the progress in WatSan situation, and the improvement of the health status of people and the process and strategies of the WatSan programme of the Forum.

## **Pani, Payonishkashon O Porichhannota Shikkha Proshikkhan Sahaika (Training Guideline on Water, Sanitation & Hygiene Education)**

*Prepared by:*

Village Education Resource Centre (VERC)      Village Education Resource Centre (VERC)

*Published by:*

October 1994

This is the Training Manual designed for teacher and religious leaders. The Manual shares the health scenario of rural Bangladesh, primary health-care and health related issues. The Manual directs the ways of using safe water for all purposes and describes good effects of using sanitary latrines, personal hygiene practices in ensuring primary health-care. The Manual highlights the role of teacher and religious leaders in primary health-care and suggests strategic motivational activities. The Manual is designed for facilitating a 3-day training course.

## **Pani, Payonishkashon O Shasthya Shikkha Bishaiak Karmee Sahaika (Guideline on Water, Sanitation and Hygiene Education)**

*Prepared by:*

Village Education Resource Centre (VERC)

*Published by:*

Village Education Resource Centre (VERC), January 2001

This publication is a Manual for the implementing staff in the organization. This Manual is developed as the support material to help the staff for teaching the target people of the community the basic issues of environment and health related issues. The Manual is used to motivate people to follow health and hygiene maintenance in their practical lives. The Manual imparts knowledge on health and hygiene issues i.e. importance and use of safe water, sanitation, hygiene practice of domestic and personal level, and other relevant issues.

## **Participatory Management of Low-cost Water Supply and Sanitation**

*Edited by:*

Dr. M. Feroze Ahmed PhD  
Hasin Jahan

*Published by:*

ITN-Bangladesh, October 2000

This Book is used as the training material in the training programmes for the teachers of engineering institutions, students graduating from different engineering institutions and professionals working in water supply and sanitation sector. This Book focuses on the objectives of these training programmes are to develop participatory management and planning skill and knowledge on social issues for sustainable water supply and sanitation facilities. The course content includes topics like participatory management and planning, community participation,

water, waste and health, drinking water sources and quality, water supply technologies in rural Bangladesh, alternative water supply technologies, iron and arsenic problems, sanitation practices and problems, low-cost sanitation technologies, health education and hygiene promotion, gender aspects in WSS, cost recovery and sustainability, management and supervision.

## **“Porichhannotar Pathey” Sanitation, Hygiene and Safe Water Usage Situation in Bangladesh**

***Prepared by:***

Thompson Social, New Delhi  
Asiatic Social, Dhaka

***Published by:***

Unicef-Bangladesh  
May 1998

This Report chronicles the experiences and learning obtained by the Thompson Social team during its field visit to different parts of Dhaka, Dinajpur, Chittagong, Bandarban, Rangamati, Noakhali and Barisal districts as well as some slum areas in Dhaka and Chittagong cities. The Report shows that more than two thirds of the rural population still pollute the environment through the use of non-sanitary latrines or open defecation. Poor environmental sanitation and hygiene practices, combined with limited use of safe water contribute to high diarrhoeal incidence and parasitic infection, particularly among children. The Report focuses that the prevailing environmental sanitation and personal hygiene conditions are the main causes for the very high incidence of diarrhoea. Streams and rivers flow freely through densely populated communities, collecting their residue of dirt and germs. The Report discloses that the constant mingling of people, their waste and surface water, constitutes a public health problem of unparalleled proportions, but is seen with a feeling of helplessness by those who are most at risk.

## **Propelling Participation**

***Study Conducted by:***

Md. Ayub Ali  
Md. Shahdat Hossain

***Published by:***

NGO Forum for DWSS  
December 2000

***Edited by:***

Joseph Halder



This Book reflects a study to assess the range of community participation, the basic working mechanism of NGO Forum's WatSan programme. This Book contains some success stories, striking features of the Community Managed WatSan Programme of NGO Forum in association with its partners, and shares the mechanism and important information on the successful WatSan practices, which have been achieved through community participation. The community people, as the key actor of Community Managed WatSan Programme, have been involved in implementing the WatSan Programme. The Book highlights that NGO Forum's software services have been creating awareness on the necessity of water and sanitation technologies and its safe use. Through awareness raising the programme is becoming demand-responsive and increasing the willingness of the people to participate in the WatSan promotion actively to make the achievement sustained.

## **Report on Communication Material Pre-Testing & Qualitative Assessment of HAPIC Implementation Process**

*Prepared by:*  
ORG-MARG QUEST LTD.

*Published by:*  
Unicef-Bangladesh, December 1999

This Report is the reflection of the Study on the evaluation of the simulation of social mobilization and communication campaign on Sanitation, Hygiene Education and Safe Water Use. The simulation involved a number of government and non-government partner organizations. The simulation was conducted to test assumptions about the Process testing of project implementation; and Pre-testing of communication materials. This Report provides a qualitative analysis of the implementation "model" designed for HAPIC (Hygiene Awareness and Product Information Campaign) based on a series of in-depth interviews and participant observation, with different stakeholders particularly at the field levels. The analysis determines the quality and effectiveness of the interactions between GOB and NGOs in planning and conducting social mobilization activities at the grassroots levels.

## **Report on Evaluation of Sanitary Latrines and Water Supply Systems Constructed Under Phase-II in Primary Schools**

*Prepared by:*  
Unicef-Bangladesh

*Published by:*  
Unicef-Bangladesh, May 1995

This publication is the Survey Report which was carried out for the evaluation on present status, use and maintenance of primary school latrine and water supply system constructed. The Report highlights on the key findings that indicate that quality of plastering of inner surface of some storage tanks was found good and fixing of some tank covers was found to be acceptable. Plastering of some latrine floors and plastering of outside wall of some latrines were found to be acceptable and 100% latrine pans were found intact. Responses of interviewees indicate that students of some schools never drink water from the storage tank. The Report focuses that teachers of some schools somehow arrange fund either from their pockets or from the examination fee paid by the students for the maintenance of school latrine and water supply system. The Report discloses that availability of ash or soap close to latrine encourages students to wash hands properly after defecation, and some other similar findings.

## **Report on Indigenous Communication Package Development**

*Prepared by:*  
FemCom Bangladesh

*Published by:*  
Unicef-Bangladesh, December 1995

This Report is based on the findings of the community investigation which mainly focused on thorough assessment of KAP on WatSan within communities investigated; and identification of folk forms, resources and talents and media/channels. The current promotional activities on WatSan need to be further strengthened and expanded through development of indigenous communication materials and packages. In response to this requirement DPHE and Unicef-Bangladesh undertook an assessment of the indigenous culture and rituals based on indigenous forms, media and channels.

The Report contains the issues like indigenous communication channels, traditional community resources and language for promotion of water supply, sanitation and hygiene at the grassroots level of the rural community. Based on the assessment an indigenous communication package was developed. The outline of the package is included in this Report.

## **Report on Preliminary Evaluation of NGO Forum Sanitation and Hygiene Activities in Seven Thanas**

*Prepared by:*  
DPHE & Unicef-Bangladesh

*Published by:*  
DPHE & Unicef-Bangladesh  
October 1994

This Report presents the findings of preliminary evaluation of Social Mobilization for Sanitation Programme implemented by NGO Forum in seven selected thanas. This is a nationally executed Project and an example of tripartite collaboration of GOB/DPHE, NGO Forum and Unicef. This evaluation is meant for helping NGO Forum, DPHE & Unicef and concerned parties in understanding the impact as well as improving the programme strategies and activities further. The specific objectives of the Project were: to increase the proper and sustained use of hygienic latrine among rural families, to increase hygienic hand washing practice, and to increase use of safe water for all domestic purposes. General objective of the evaluation was to evaluate the sanitation and hygiene in seven selected thanas carried out by NGO Forum. The Report highlights that a great majority of people had been using tubewell water for drinking purpose through different sources irrespective of their education and interest. But it is rather shocking that about 56% people had still been using water from ditches, ponds, wells, rivers or, canals for cooking purpose. About 90% people were found having own latrines.

## **Report on the Baseline Survey and Qualitative Assessments Sanitation and Family Education Resource (SAFER) Project**

*Prepared by:*  
Md. Sharifuzzaman

*Published by:*  
CARE-Bangladesh, February 1996

*Reviewed & Edited by:*  
Florence Durandin  
Afroza Ahmed  
Afroza Akhter

This Report especially focuses on hygiene education behaviour programme. It particularly describes how the information is used on current beliefs and practices in the project communities in order to focus and develop SAFER hygiene education interventions. The Report focuses on general description of the study households, diarrhoea prevalence, water sources and water use patterns, access to sanitation facilities, latrine use and faeces disposal, environmental cleanliness and contamination, knowledge on diarrhoea prevention, hand-washing, food hygiene and diarrhoea treatment.

The Report highlights on the survey findings and qualitative assessments that 76% families had access to any type of latrine - unhygienic with relatively few hygienic, 59% households used tubewell water for cooking and 44% households obtained pond water for cooking.

## **Report on the Final Surveys Sanitation & Family Education (SAFE) Pilot Project**

*Prepared by:*

O. Masseur Bateman, M.D.

*Published by:*

CARE-Bangladesh, February 1995

This Report shows the result that diarrhoea is common in children under 5 in the surveyed areas and mothers have little understanding of the causes of diarrhoea and in prevention, several specific risk for diarrhoea were identified. The Report focuses on the rehabilitation and installation of water and sanitation hardware. This Report presents the main findings from the final quantitative surveys. This Report focuses on a hygiene education project, the approach is applicable to any project where behaviour change is the key objective. This Report is organized into Introduction, Overview of the SAFE Pilot Project, Methodology, Results, and Conclusions and Recommendations. This Report will be useful to policy-makers, programme planners and managers and others interested in setting programme priorities, designing culturally appropriate programmes, developing monitoring systems, and designing pilot projects.

## **Report on Training on Communication Skills, Sanitation, Personal Hygiene and Water Use**

*Prepared by:*

Centre for Woman &  
Child Development (CWCD)

*Published by:*

DPHE & Unicef-Bangladesh  
May 1996

This Report provides information on the training course on communication skills, sanitation, personal hygiene and water use to raise the awareness regarding these issues among people from all strata of the society. The Report highlights that unless the general mass people are made aware and motivated, the deplorable conditions of sanitation will not improve. This awareness building of people directly or indirectly involved with sanitation and personal hygiene programme. The Report focuses that the training programme is a successful means in enhancing the capacity of the participants to plan and manage their own programme effectively, within the limits of resources available to them. The Report elaborates different effective tools and techniques of training and concludes that training is the effective process of information and knowledge dissemination.

## **Sangsarik Kajey Pani Byabohar Sanitation O Pariskar Porichchannota Bishaiak Moulik Shikkha (Basic Education on Water Use, Sanitation and Hygiene in Household Works)**

## Training Manual

*Edited by:*  
M.A. Rahim

*Published by:*  
ICDDR,B, June 1996

This Training Manual is to help in providing training for social workers. This Manual describes about safe water, sanitation and hygiene issues in household works. The basic information on these issues and the relation with those with sound health are depicted. The process of installing, using and maintaining hygienic latrines, disposal of waste, collection and use of safe water for all purposes and maintaining the source of safe water, process of water purification, hand washing practice, maintaining hygiene habits etc. are described in details in this publication. For establishing a disease-free and healthy society participation of all level of community people is necessary. To raise awareness on WatSan and environmental issues dissemination of factual information and providing training are necessary. The social workers trained up following this Manual will be able to reach health messages to all level of the society.

### School Sanitation and Hygiene Education Programme **Training Manual for Primary School Teachers & SMC Members**

*Prepared by:*  
Communica

*Published by:*  
DPHE & Unicef-Bangladesh

This is a Training Manual designed for primary school teachers and SMC members. The training contents, instruction, lesson plan, schedule, process, presentation, method/technique, etc. are incorporated in this Manual. The Manual highlights that the change in personal and social behavior is very important to achieve sustainable improvement in this sector. School Sanitation and Hygiene Education Programme is an initiative to motivate the students for building their proper habit and to develop them as a catalyst to change the community practices. Involvement of the target primary school students in this learning process needs to pass over some steps, i.e. how teachers can acquire skill in the subject; how teachers can be developed as trainers; etc. have been reflected in this Manual.

## **Staying Alive: Urban Poor in Bangladesh**

*Written by:*  
Shaheen Anam

*Published by:*  
Unicef-Bangladesh, 1993

*Edited by:*  
Rachel Kabir  
Prava Rai

The poor contribute to every aspect of city life and play a crucial role in the national economy of Bangladesh. This Book speaks on how they cope with in the absence of basic necessities such as housing, health services, nutrition, water, sanitation and education, and finally survive. The Book demonstrates to understand their situation through graphics and pictures. Single or, married, poor urban women carry the double burden of looking after the family and working outside the home. The Book highlights the role of poor urban women in the national economy, the discrimination they suffer in the work place on the basis of gender and their capacity to overcome the obstacles to survive. The Book illustrates and highlights the situation in which already 18.32 million people live. By creating a more sympathetic awareness of their plight, this Book can make a positive contribution in the search for a solution to the problems of the urban poor.

### **Study on Hygiene Behaviour Leading to Enhancement of Use of Tubewell Water and Sanitation**

*Prepared by:*  
DPHE, WHO & Unicef

*Published by:*  
DPHE, WHO & Unicef-Bangladesh  
November 2000

This Report focuses on the survey findings that about 96 percent of the respondents use groundwater for drinking purposes and of them majority (73%) use shallow tubewell. Some 4% of the respondents use water from other sources, which are not safe. Although 96% of the people use tubewell water for drinking purposes, larger percentages of the respondents do not use pure water for other purposes like dish washing, gargling, hand washing before taking food, washing fruits, laundry, bathing and ablution. The Report reveals that 50% of the respondents use tubewell water as it prevents stomach disorder, 20% use tubewell water for drinking purposes, as it is safe, 13.5% use tubewell as it prevents diarrhoea/cholera. The Report shows that the worst platform conditions lie with the private tubewells many of which either damaged or do not exit. Most of the tubewell do not have good drainage system. This Report highlights that the knowledge about diseases caused by the use of unsanitary latrine is an indicator of level of awareness of the people about the sanitation.

## **The Community Comes Forth**

***Study Conducted by:***

Sanchia Nishat Chowdhury  
Molla Amzad Hossain

***Published by:***

NGO Forum for DWSS  
December 1998

***Edited by:***

Joseph Halder

The grassroots people are beneficiaries and also co-actors in the development arena. Their views, opinions, range of acceptance and perception are very important and of great importance. This Book attempts to accumulate a handful of instances in the rural WatSan sector. This is an attempt to acknowledge the concerted experience and perception of the development initiatives among the beneficiaries and implementing organizations in the WatSan sector. What people say and think about their WatSan problems and progress have been considered with due importance and highlighted accordingly in this Book. This Book is a documentary note of working process, progress and the ultimate result achieved by NGO Forum through its harmoniously balanced integrated WatSan support in communion with its partners and the grassroots people.

## **The National Survey on Status of Rural Water Supply and Sanitation Tubewell Sample Forms (TSF)**

***Prepared by:***

Mitra and Associates

***Published by:***

DPHE & Unicef-Bangladesh, August 1992

The National Survey carried out during November 1991 through January 1992, was intended to investigate into situations pertaining to the water supply and sanitation sector in the rural and urban slum areas of the country. The Survey covered the water supply and sanitation sector in the rural and urban slum areas considering different hydrogeological classification of the country. The Report contains the salient findings from the Survey. The Survey shows coverage of accessibility to and use of HPSs, conditions of hand pump systems (HPSs), sanitation, awareness of hygienic practices, and health communication.

## **Trainer's Manual for Orientation of Field Workers**

*Prepared by:*

Centre for Woman and  
Child Development (CWCD)

*Published by:*

DPHE & Unicef-Bangladesh  
October 1995

This is a Trainer's Manual for orientation of field workers who are involved in water and sanitation promotion. This Manual is comprised of training contents, schedule, lesson plan, lesson process, training objectives. This Manual has been developed to orient the Field Workers as "motivator/communicator". This Manual is designed based on a 3-day training course for the field workers to impart them the know-how for motivating the target people to use safe water for all purposes, use sanitary latrine and maintain personal hygiene and cleanliness for better environment. The Manual focuses on field workers of different government departments and the projectionists of DPHE who are playing an important role in the promotion of sanitation and hygiene by motivating the target people and by providing hardware/logistic support as and when required.

## **Trainer's Manual for Orientation of Religious Leaders**

*Prepared by:*

Centre for Woman and  
Child Development (CWCD)

*Published by:*

DPHE & Unicef-Bangladesh  
November 1994

This Trainer's Manual is comprised of training contents, schedule, lesson plan, lesson process, training objectives, etc. This Manual is designed for imparting training for the religious leaders of Bangladesh in social mobilization for water and sanitation to enable them motivate the target people to use safe water for all purposes, use sanitary latrines and maintain personal hygiene and cleanliness for better environment. The Manual focuses on the need of orientation of religious leaders as they are very influential in their communities since people respect them. The Manual is designed for imparting a one-day training course on social mobilization for sanitation sector. Since all religions encourage cleanliness, personal hygiene and environmental hygiene the religious leaders will be able to convince the people about sanitation and hygiene. If they learn the techniques of communication, motivation and social mobilization through this



training Manual it will enable them to motivate the people on sanitation and hygiene effectively.

## **Trainer's Manual for Orientation of School Teachers**

***Prepared by:***

Centre for Woman and  
Child Development (CWCD)

***Published by:***

DPHE & Unicef-Bangladesh  
September 1995

This is a Trainer's Manual for orientation of school teachers on social mobilization and communication skills on sanitation, hygiene and safe water use. The Manual is comprised of training contents, schedule, lesson plan, lesson process, training objectives, etc. The Manual is designed to develop school teachers as communicators. The Manual is targeted to impart a 2-day training for school teachers to motivate the student to use safe water for all purposes, use sanitary latrines and maintain personal hygiene and cleanliness for better environment and health. The Manual describes objectives and necessity for orientation of school teachers as they can play an important role in the promotion of sanitation and hygiene through motivating their students effectively. If the teachers have regular discussions on sanitation and hygiene and arrange health education classes in all schools this Manual would be very useful in the promotion of sanitation and hygiene throughout the country. They can also motivate the parents of their students to organize monthly/weekly parents meeting following this Manual.

## **Trainer's Manual for Orientation of Union Parishad Chairmen**

***Prepared by:***

Centre for Woman and  
Child Development (CWCD)

***Published by:***

DPHE & Unicef-Bangladesh  
September 1995

This is a Manual for orientation of Union Parishad Chairmen. This Manual is used as the support material to train the Union Parishad Chairmen of Bangladesh. They are enabled through this training course to motivate the target people to use safe water for all domestic purposes, use sanitary latrines and maintain personal hygiene and cleanliness for better environment. The Manual focuses that as they are elected by the people directly and work closely with the grassroots level people and recognized as the local leaders both by the government and the community, they will be able to motivate the people on sanitation and

hygiene, and change the present sanitation and hygiene practices effectively in their respective areas. The Manual is also appropriate for, alongside the Union Parishad Chairmen, imparting orientation to other community allies on the techniques of social mobilization, communication and motivation.

## **Trainer's Manual for Training of Executive and Sub-Divisional Engineers**

***Prepared by:***

Centre for Woman and  
Child Development (CWCD)

***Published by:***

DPHE & Unicef-Bangladesh  
December 1995

This publication is the Trainer's Manual for training of Executive and Sub-Divisional Engineers. The Manual is comprised of training contents, schedule, lesson plan, lesson process, training objectives, etc. This Trainer's Manual helps the trainers to orient the Executive Engineers as "motivator and communicator" on sanitation, hygiene and safe water use. The Manual is designed as a tool for facilitating a 5-day training course. Following this Manual the participants can be able to analyze situation of sanitation and hygiene problems in Bangladesh, impact of poor sanitation and hygiene on environment and health, transmitting routes of water and faecal-borne diseases and its preventive measures, and overcoming the problems of poor sanitation and hygiene.

## **Trainer's Manual for Training of Masons**

***Prepared by:***

Centre for Woman and  
Child Development (CWCD)

***Published by:***

DPHE & Unicef-Bangladesh  
August 1995

This Trainer's Manual is designed for a 2-day training course of Masons. This Manual is a support material of the trainer's targeted to give lesson for the masons to enable them facilitating social mobilization for water and sanitation. The Masons are the technical staff those work at Village Sanitation Centres (VSC). If they are trained up they will be able to motivate the target people to use safe water for all purposes, use sanitary latrines and maintain personal hygiene and cleanliness for better environment and health. They have the opportunity to contact the target people closely. The Manual describes if these Masons act as "motivators/communicators" to promote the sanitation within the community, the sanitation coverage will be increased rapidly. By the skills and knowledge gained from this training package the Masons will be able to motivate the target people use safe water and sanitary facilities.

## **Trainer's Manual for Training of Sub-Assistant Engineers and Health Education Staff**

*Prepared by:*

Centre for Woman and  
Child Development (CWCD)

*Published by:*

DPHE & Unicef-Bangladesh  
December 1995

This Manual is the support material to train up the Sub-Assistant Engineer and Health Education Staff as “motivator and communicator”. This Manual is designed to help in facilitating the training course on social mobilization for water and sanitation successfully so that the participants can be able to motivate the target people to use safe water in all domestic purposes, use sanitary latrine and maintain personal hygiene and cleanliness for better environment. After completion of the training course they will be able to involve people to promote water, sanitation and hygiene programme, identify the problems of poor sanitation & hygiene and know-how to overcome these problems. And they will be able to communicate effectively at different levels, and monitor, supervise and evaluate the water and sanitation programme. The Manual is designed as a tool for facilitating a 5-day training course.

## **Trainer's Manual for Training of Tubewell Mechanics**

*Prepared by:*

Centre for Woman and  
Child Development (CWCD)

*Published by:*

DPHE & Unicef-Bangladesh  
September 1995

This is a Trainer's Manual for Training of Tubewell Mechanics. The Manual is comprised of training contents, schedule, lesson plan, lesson process, training objectives, etc. This Manual is designed to train up the tubewell mechanics of Bangladesh in social mobilization for water and sanitation for enabling them motivate the target people to use safe water in all their activities, use sanitary latrine and maintain personal hygiene and cleanliness for better environment. This Manual has been developed with a view to providing orientation to the tubewell mechanics as “motivator/communicator”. This Manual describes the importance of imparting training course for the tubewell mechanics. The training is designed for 5 days following this Manual.

**Udbuddhakaron Karjokram Parichalonai Jogajog Dakkhota Unnayan  
Proshikkhan Sahaika  
(Training Module on Communication and Facilitation of Promotional Activities)**

*Prepared by:*  
Training Cell, NGO Forum for DWSS

*Published by:*  
NGO Forum for DWSS

This is a Training Module on Communication and Facilitation of Promotional Activities, designed for WatSan programme implementing field workers of partner NGOs and supervisors to increase their proficiency on communication and promotional programme so that they can facilitate promotional activities and awareness raising. The Module for the 4-day training course has the following contents: i) Goal, objective and components of WatSan programme; ii) Safe water, hygienic latrine and cleanliness; iii) Communication, one-way and two-way communication; iv) Obstruction and solution of effective communication; v) Technique of listening and questionnaire; vi) Promotional programme and its objectives; vii) Different steps of promotional programme implementation; and viii) Communication and motivational programme conduction.

**Water Use, Sanitation Practice and Personal Hygiene Behaviour in  
WHDP Areas**

*Prepared by:*  
Ahmed Ali  
Shah Noor Mahmud  
Md. Nazrul Islam  
Fazlul Karim

*Published by:*  
BRAC, February 1995

This is a cross-sectoral Study Report conducted to assess the extent and reasons for existing pattern of use of tubewell water and latrine, and personal hygiene practices.

The Report highlights that a total of 40 households were observed, 75% of whom were from target groups. The Report reveals from observations and interviews that use of tubewell water for drinking was universal. The reported use rate of tubewell-water for cleaning and washing, water storage, disposal of solid waste and faeces to safe places were much higher than the figures found through direct observation. The use of tubewell-water was predominantly

influenced by distance of households from tubewell and ponds, traditional behaviour, and in accessibility of the females to tubewell.

It was found through interview, observation, and FGDs that none of them had used slab or pit latrines. Lack of latrine, traditional defecation behaviour of the people, and breaking of pit latrine were the reasons for non-use of latrines. Besides, the Report contains other findings regarding hand washing practice, other hygiene behaviour like proper use of latrines, water use, brushing teeth, etc.

## **Workshop on Sanitation for Scouts**

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This Report focuses on personal cleanliness, use of tubewell water for all domestic purposes, and use of sanitary latrine, which ensures a healthy life and protects from diseases and pollution. This Report stresses on awareness building about sanitation to the people of different walks of life throughout Bangladesh. As it is very critical issue each and everyone should take active part in sensitization about sanitation. It is a very gigantic work and is not possible for an individual to carry out the programme alone, hence the importance of establishing a network among all agencies to carry out this programme is vital. The teachers and the Scouts are the key persons to disseminate any idea to the community. Therefore, the teachers who are involved in the Scouts movement of the secondary schools and colleges were selected to enhance the programme as clean and sound environment is necessary for healthy living.